

Logging in to Dialog

Trying 3106900061...Open

DIALOG INFORMATION SERVICES

PLEASE LOGON:

\*\*\*\*\*

ENTER PASSWORD:

□t840lcpq

\*\*\*\*\*

Welcome to DIALOG

Dialog leel 01.07.09D

Lat logoff: 04j101 12:29:09

Logon file001 28j101 18:28:13

\*\*\* ANNOUNCEMENT \*\*\*

\*\*\*

--Important Notice to Freelance Athor--

See HELP FREELANCE for more information

\*\*\*

NEW FILE RELEASED

\*\*\*EIU Bine Magaine (File 622)

\*\*\*IBISWorld Market Research (File 753)

\*\*\*Inetext PDF Index (File 745)

\*\*\*Dail and Snda Telegraph (London) Paper (File 756)

\*\*\*The Mirror Grop Pblication (United Kingdom) (File 757)

UPDATING RESUMED

\*\*\*Delphe Eropean Bine (File 481)

\*\*\*Book In Print (File 470)

\*\*\*

RELOADED

\*\*\*Kompa Middle Eat/Africa/Mediterranean (File 585)

\*\*\*Kompa Aia/Pacific (File 592)

\*\*\*Kompa Central/Eatern Erope (File 593)

\*\*\*Kompa Canada (File 594)

New pricing trctre for Pharmaproject (File 128/928) from  
April 1, 2001. Check Help New128 or Help New928 for frther  
information.

>>>Get immediate new with Dialog' Firt Release  
new erice. Firt Release pdate major newwire  
databae within 15 minte of tranmilion oer the  
wire. Firt Release proide fll Dialog earchabilit  
and fll-text featre. To earch Firt Release file in  
OneSearch impl BEGIN FIRST for coerage from Dialog'  
broad pectrm of new wire.

>>> Enter BEGIN HOMEBASE for Dialog Annoncement <<<

>>> of new databae, price change, etc. <<<

\*\*\*\*

File 1:ERIC 1966-2001/J1 13

(c) format onl 2001 The Dialog Corporation

Set Item Decription

? dialog

>>>'IALOG' not recognized as set or accession number  
? b 410

28jul01 18:28:16 User233835 Session D505.1  
\$0.42 0.119 DialUnits File1  
\$0.42 Estimated cost File1  
\$0.05 TYMNET  
\$0.47 Estimated cost this search  
\$0.47 Estimated total session cost 0.119 DialUnits

File 410:Chronolog(R) 1981-2001/June  
(c) 2001 The Dialog Corporation

Set Items Description  
--- -----

? set hi ;set hi

HILIGHT set on as ''  
HILIGHT set on as ''  
? b 155, 5, 357

28jul01 18:28:24 User233835 Session D505.2  
\$0.00 0.057 DialUnits File410  
\$0.00 Estimated cost File410  
\$0.01 TYMNET  
\$0.01 Estimated cost this search  
\$0.48 Estimated total session cost 0.176 DialUnits

SYSTEM:OS - DIALOG OneSearch  
File 155:MEDLINE(R) 1966-2001/Aug W2  
File 5:Biosis Previews(R) 1969-2001/Jul W4  
(c) 2001 BIOSIS  
File 357:Derwent Biotechnology Abs 1982-2001/Aug B1  
(c) 2001 Derwent Publ Ltd  
\*File 357: Price changes as of 1/1/01. Please see HELP RATES 357.

Set Items Description  
--- -----

? e au=loeb, lawrence

Ref	Items	Index-term
E1	1	AU=LOEB-ZEITLIN S
E2	1	AU=LOEB-ZEITLIN SUSAN
E3	0	*AU=LOEB, LAWRENCE
E4	3	AU=LOEBACH J
E5	1	AU=LOEBACH J L
E6	2	AU=LOEBACH JENNIFER
E7	2	AU=LOEBACH M
E8	1	AU=LOEBACH WETHERELL J
E9	1	AU=LOEBAU S
E10	1	AU=LOEBB M J
E11	1	AU=LOEBBECKE ANDREA
E12	2	AU=LOEBBECKE F

Enter P or PAGE for more  
? e au=loeb, 1

Ref	Items	Index-term
E1	1	AU=LOEB-ZEITLIN S
E2	1	AU=LOEB-ZEITLIN SUSAN

E3	0	*AU=LOEB,
E4	3	AU=LOEBACH
E5	1	AU=LOEBACH J L
E6	2	AU=LOEBACH JENNIFER
E7	2	AU=LOEBACH M
E8	1	AU=LOEBACH WETHERELL J
E9	1	AU=LOEBAU S
E10	1	AU=LOEBB M J
E11	1	AU=LOEBBECKE ANDREA
E12	2	AU=LOEBBECKE F

Enter P or PAGE for more

? p

Ref	Items	Index-term
E13	1	AU=LOEBBECKE J V
E14	3	AU=LOEBBECKE LUDWIG
E15	1	AU=LOEBBECKE STEFAN
E16	1	AU=LOEBBEL H
E17	2	AU=LOEBBERDING A
E18	1	AU=LOEBBERING U
E19	2	AU=LOEBBERT J
E20	4	AU=LOEBBERT K
E21	10	AU=LOEBBERT KERSTIN
E22	1	AU=LOEBBERT M
E23	8	AU=LOEBBERT R
E24	2	AU=LOEBBERT R W

Enter P or PAGE for more

? p

Ref	Items	Index-term
E25	2	AU=LOEBBERT RALF
E26	3	AU=LOEBBERT RALF W
E27	1	AU=LOEBE D
E28	1	AU=LOEBE F M
E29	3	AU=LOEBE F-M
E30	15	AU=LOEBE FM
E31	5	AU=LOEBE J
E32	4	AU=LOEBE L P
E33	12	AU=LOEBE L-P
E34	109	AU=LOEBE M
E35	5	AU=LOEBE MATHIAS
E36	25	AU=LOEBE MATTHIAS

Enter P or PAGE for more

? e au=loeb, l

Ref	Items	Index-term
E1	1	AU=LOEB-ZEITLIN S
E2	1	AU=LOEB-ZEITLIN SUSAN
E3	0	*AU=LOEB, L
E4	3	AU=LOEBACH J
E5	1	AU=LOEBACH J L
E6	2	AU=LOEBACH JENNIFER
E7	2	AU=LOEBACH M
E8	1	AU=LOEBACH WETHERELL J
E9	1	AU=LOEBAU S
E10	1	AU=LOEBB M J
E11	1	AU=LOEBBECKE ANDREA
E12	2	AU=LOEBBECKE F

Enter P or PAGE for more  
? e au=mullins

Ref	Items	Index-term
E1	3	AU=MULLINNIX MICHAEL J
E2	2	AU=MULLINNIX MJ
E3	0	*AU=MULLINS
E4	6	AU=MULLINS A
E5	1	AU=MULLINS A D
E6	5	AU=MULLINS A J
E7	3	AU=MULLINS A L
E8	5	AU=MULLINS A M
E9	3	AU=MULLINS A P
E10	2	AU=MULLINS AC
E11	1	AU=MULLINS AD
E12	1	AU=MULLINS AJ

Enter P or PAGE for more  
? e au=mullins, jame

Ref	Items	Index-term
E1	1	AU=MULLINS-HIRTE DJ
E2	1	AU=MULLINS-KEENE CL
E3	0	*AU=MULLINS, JAME
E4	1	AU=MULLINSIN AP
E5	2	AU=MULLIS A
E6	5	AU=MULLIS A K
E7	1	AU=MULLIS A W
E8	7	AU=MULLIS AK
E9	3	AU=MULLIS B
E10	1	AU=MULLIS BRIAN H
E11	14	AU=MULLIS C H
E12	3	AU=MULLIS C H JR

Enter P or PAGE for more  
? e au=mullins, james

Ref	Items	Index-term
E1	1	AU=MULLINS-HIRTE DJ
E2	1	AU=MULLINS-KEENE CL
E3	0	*AU=MULLINS, JAMES
E4	1	AU=MULLINSIN AP
E5	2	AU=MULLIS A
E6	5	AU=MULLIS A K
E7	1	AU=MULLIS A W
E8	7	AU=MULLIS AK
E9	3	AU=MULLIS B
E10	1	AU=MULLIS BRIAN H
E11	14	AU=MULLIS C H
E12	3	AU=MULLIS C H JR

Enter P or PAGE for more  
? e au=mullins, j

Ref	Items	Index-term
E1	1	AU=MULLINS-HIRTE DJ
E2	1	AU=MULLINS-KEENE CL
E3	0	*AU=MULLINS, J
E4	1	AU=MULLINSIN AP
E5	2	AU=MULLIS A
E6	5	AU=MULLIS A K

E7 1 AU=MULLIS W  
E8 7 AU=MULLIS X  
E9 3 AU=MULLIS B  
E10 1 AU=MULLIS BRIAN H  
E11 14 AU=MULLIS C H  
E12 3 AU=MULLIS C H JR

Enter P or PAGE for more

? logoff

28jul01 18:31:20 User233835 Session D505.3  
\$0.51 0.158 DialUnits File155  
\$0.51 Estimated cost File155  
\$1.06 0.189 DialUnits File5  
\$1.06 Estimated cost File5  
\$2.80 0.221 DialUnits File357  
\$2.80 Estimated cost File357  
OneSearch, 3 files, 0.568 DialUnits FileOS  
\$0.15 TYMNET  
\$4.52 Estimated cost this search  
\$5.00 Estimated total session cost 0.744 DialUnits  
Logoff: level 01.07.09 D 18:31:20

Logging in to Dialog

Trying 9158046...Open

DIALOG INFORMATION SERVICES

PLEASE LOGON:

\*\*\*\*\*

ENTER PASSWORD:

t840lcpq

\*\*\*\*\*

Welcome to DIALOG

Dialog level 99.01.29D

Last logoff: 28jan99 15:21:34

Logon file001 03feb99 12:38:00

ANNOUNCEMENT \*\*\*\* ANNOUNCEMENT \*\*\*\* ANNOUNCEMENT

NEW

\*\*\*Financial Times Abstracts - January 4, 1999

\*\*\*MediConf (File 431) - December 1, 1998

\*\*\*

RELOADED

\*\*\*EMBASE (Files 72,73)

\*\*\*CLAIMS/U.S. Patents (340, 341, 942)

\*\*\*BIOSIS Previews (File 5,55)- enhanced 11/16/98, see HELP NEWS5

\*\*\*Claims Reassignment/Reexamination (File 123)

\*\*\*

REMOVED

\*\*\*Disclosure Database, File 100, removed 1/31/99

\*\*\*Technimetrics Executive Directory, File 552,  
removed effective 1/31/99

\*\*\*Hoppenstedt Dir of German Companies removed  
effective 12/31/98

\*\*\*

DIALINDEX

\*\*\*DIALINDEX categories have been revised. For listing of new/revised  
dialog

categories see <http://library.dialog.com/bluesheets/html/blo.html>.

For more details, see HELP NEWS411.

>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<

>>> of new databases, price changes, etc. <<<

\*\*\*\*\* The DIALORDER suppliers DYNAMIC and FILEDOC are no longer \*\*\*\*\*  
\*\*\*\*\* in business. Please do not use them. \*\*\*\*\*

\*\*\*\*\*  
\*\*\*\*\*File 265: Please use file 266 as file 265 is no longer \*\*\*\*\*  
\*\*\*\*\* available. \*\*\*\*\*

\*\*\*\*\* The MASIS DIALORDER service has been discontinued. For \*\*\*\*\*  
\*\*\*\*\* details, please contact MARUZEN CO. LTD, at 3-3272-3496. \*\*\*\*\*

\*\*\*\*\*  
\*\*\*\*\* Files 100 and 552 have been removed from DIALOG. \*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\* NEW CURRENT year ranges installed. \*\*\*\*\*

File 1:ERIC 1966-1998/Dec

(c) format only 1999 The Dialog Corporation

\*File 1: In 1999, RIF and CIJE sections will be added separately, as soon as they arrive. Ds may be irregular. UD codes will change.

Set Items Description

? b 410

>>>'IALOG' not recognized as set or accession number

? set hi ;set hi

03feb99 12:38:08 User233835 Session D235.1

\$0.31 0.095 DialUnits File1

\$0.31 Estimated cost File1

FTSNET 0.016 Hrs.

\$0.31 Estimated cost this search

\$0.31 Estimated total session cost 0.095 DialUnits

File 410:Chronolog(R) 1981-1999 Jan/Feb

(c) 1999 The Dialog Corporation plc

Set Items Description

?

HIGHLIGHT set on as ''

HIGHLIGHT set on as ''

? b 155,5, 399, 357, 351, 654

03feb99 12:39:11 User233835 Session D235.2

\$0.00 0.041 DialUnits File410

\$0.00 Estimated cost File410

FTSNET 0.033 Hrs.

\$0.00 Estimated cost this search

\$0.31 Estimated total session cost 0.136 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 155:MEDLINE(R) 1966-1999/Mar W4

(c) format only 1999 Dialog Corporation

File 5:BIOSIS PREVIEWS(R) 1969-1999/Jan W3

(c) 1999 BIOSIS

File 399:CA SEARCH(R) 1967-1999/UD=13005

(c) 1999 American Chemical Society

\*File 399: Use is subject to the terms of your user/customer agreement.

RANK charge added; see HELP RATES 399.

File 357:Derwent Biotechnology Abs 1982-1999/Feb B1

(c) 1999 Derwent Publ Ltd

\*File 357: Effective October 1, DialUnit rates adjusted for unrounding.

See HELP NEWS 357 for details.

File 351:DERWENT WPI 1963-1998/UD=9904;UP=9904;UM=9904

(c)1999 Derwent Info Ltd

\*File 351: From UD=9901, UM= and UP= update codes will "jump ahead."

See HELP NEWS 351 for info on Alert problems in updates 9851 and 9901.

File 654:US Pat.Full. 1990-1999/Jan 26

(c) format only 1999 The Dialog Corp.

\*File 654: Reassignment data now current through 08/20/98.

Reexamination, extension, expiration, reinstatement updated weekly.

Set Items Description

? s ribonucleoside and (analog or analogs)

5561 RIBONUCLEOSIDE

264434 ANALOG

434367 ANALOGS

S1 871. RIBONUCLEOSIDE AND (ANALOG OR ANALOGS)

? s s1 and (virus or viral)

871 S1  
 861523 VIRUS  
 428212 VIRAL  
 S2 276 S1 AND (VIRUS OR VIRAL)  
 ? s s2 and (incorporate or incorporation)  
  
 276 S2  
 144843 INCORPORATE  
 230968 INCORPORATION  
 S3 141 S2 AND (INCORPORATE OR INCORPORATION)  
 ? ds

Set	Items	Description
S1	871	RIBONUCLEOSIDE AND (ANALOG OR ANALOGS)
S2	276	S1 AND (VIRUS OR VIRAL)
S3	141	S2 AND (INCORPORATE OR INCORPORATION)

? t s1/6/1-15

1/6/1 (Item 1 from file: 155)  
 09746991 99024021

Demonstration of equilibrative nucleoside transporters (hENT1 and hENT2) in nuclear envelopes of cultured human choriocarcinoma (BeWo) cells by functional reconstitution in proteoliposomes.  
 Nov 13 1998

1/6/2 (Item 2 from file: 155)  
 09744183 99059478

Evidence that the AMP-activated protein kinase stimulates rat liver carnitine palmitoyltransferase I by phosphorylating cytoskeletal components.  
 Nov 20 1998

1/6/3 (Item 3 from file: 155)  
 09680820 98414643

Biochemical and kinetic analyses of NS5B RNA-dependent RNA polymerase of the hepatitis C virus.  
 Sep 15 1998

1/6/4 (Item 4 from file: 155)  
 09636471 98366904

Evidence for 5' AMP-activated protein kinase mediation of the effect of muscle contraction on glucose transport.  
 Aug 1998

1/6/5 (Item 5 from file: 155)  
 09572290 98295761

Metabolism and metabolic actions of 6-methylpurine and 2-fluoroadenine in human cells.  
 May 15 1998

1/6/6 (Item 6 from file: 155)  
 09519764 98241707

Resistance of human cytomegalovirus to benzimidazole ribonucleosides maps to two open reading frames: UL89 and UL56.  
 Jun 1998



1/6/7 (Item 7 from file: 155)  
09498638 98217309

Gemcitabine 5'-triphosphate is a stoichiometric mechanism-based inhibitor of *Lactobacillus leichmannii* **ribonucleoside** triphosphate reductase: evidence for thiyl radical-mediated nucleotide radical formation.  
Apr 21 1998

1/6/8 (Item 8 from file: 155)  
09458381 98162621

Inhibition of glucocorticoid-induced apoptosis with 5-aminoimidazole-4-carboxamide **ribonucleoside**, a cell-permeable activator of AMP-activated protein kinase.  
Feb 24 1998

1/6/9 (Item 9 from file: 155)  
09401863 98097814

AICA riboside increases AMP-activated protein kinase, fatty acid oxidation, and glucose uptake in rat muscle.  
Dec 1997

1/6/10 (Item 10 from file: 155)  
09387674 98092286

DNA helicase activity of the hepatitis C virus nonstructural protein 3.  
Nov 15 1997

1/6/11 (Item 11 from file: 155)  
09258976 97169003

Control of hepatic fatty acid oxidation by 5'-AMP-activated protein kinase involves a malonyl-CoA-dependent and a malonyl-CoA-independent mechanism.  
Jan 15 1997

1/6/12 (Item 12 from file: 155)  
09223623 96176952

Deoxyribonucleoside triphosphate pools and growth of glutathione-depleted 3T6 mouse fibroblasts.  
Mar 7 1996

1/6/13 (Item 13 from file: 155)  
09183615 97450847

Antitumor and radiosensitizing effects of (E)-2'-deoxy-2'-(fluoromethylene) cytidine, a novel inhibitor of **ribonucleoside** diphosphate reductase, on human colon carcinoma xenografts in nude mice.  
Sep 15 1997

1/6/14 (Item 14 from file: 155)  
09166167 97402550

pH dependence of self-splicing by the group IA2 intron in a pre-mRNA derived from the *nrdB* gene of bacteriophage T4.  
Sep 1 1997

1/6/15 (Item 15 from file: 155)  
09122001 97364001

Phase I trial of fluorouracil modulation by N-phosphonacetyl-L-aspartate and 6-methylmercaptapurine **ribonucleoside** (MMPR), and leucovorin in patients with advanced cancer.  
1997

2, t s2/6/1-15

2/6/1 (Item 1 from file: 155)  
09680820 98414643

Biochemical and kinetic analyses of NS5B RNA-dependent RNA polymerase of the hepatitis C **virus**.  
Sep 15 1998

2/6/2 (Item 2 from file: 155)  
09572290 98295761

Metabolism and metabolic actions of 6-methylpurine and 2-fluoroadenine in human cells.  
May 15 1998

2/6/3 (Item 3 from file: 155)  
09519764 98241707

Resistance of human cytomegalovirus to benzimidazole ribonucleosides maps to two open reading frames: UL89 and UL56.  
Jun 1998

2/6/4 (Item 4 from file: 155)  
09387674 98092286

DNA helicase activity of the hepatitis C **virus** nonstructural protein 3.  
Nov 15 1997

2/6/5 (Item 5 from file: 155)  
09166167 97402550

pH dependence of self-splicing by the group IA2 intron in a pre-mRNA derived from the nrdB gene of bacteriophage T4.  
Sep 1 1997

2/6/6 (Item 6 from file: 155)  
08972416 97210804

Design, synthesis, and antiviral evaluation of 2-chloro-5,6-dihalo-1-beta-D-ribofuranosylbenzimidazoles as potential agents for human cytomegalovirus infections.  
Feb 28 1997

2/6/7 (Item 7 from file: 155)  
08972414 97210802

Synthesis and antiproliferative and antiviral activity of carbohydrate-modified pyrrolo[2,3-d]pyridazin-7-one nucleosides.  
Feb 28 1997

2/6/8 (Item 8 from file: 155)  
08972412 97210800

Synthesis, antiproliferative and antiviral activity of imidazo[4,5-d]isothiazole nucleosides as 5:5 fused **analogs** of nebularine and 6-methylpurine **ribonucleoside**.  
Feb 28 1997

2/6/9 (Item 9 from file: 155)  
08612475 96264015

Inhibition of neurotropic mouse retrovirus replication in glial cells by synthetic oligo(2'-O-methyl)**ribonucleoside** phosphorothioates.

Dec 1995

2/6/10 (Item 10 from file: 155)  
08386569 95378261

The in vitro translocase activity of lambda terminase and its subunits.  
Kinetic and biochemical analysis.  
Aug 25 1995

2/6/11 (Item 11 from file: 155)  
07499537 93188169

Nucleotide sequence of the primer RNA for DNA replication of filamentous bacteriophages.  
Apr 1993

2/6/12 (Item 12 from file: 155)  
06629901 90249588

The metabolism of ribavirin in erythrocytes and nucleated cells.  
1990

2/6/13 (Item 13 from file: 155)  
06253455 86111810

Inhibition of herpes simplex virus DNA polymerase by purine ribonucleoside monophosphates.  
Feb 5 1986

2/6/14 (Item 14 from file: 155)  
06116075 87036919

Metabolic activation of 9([2-hydroxy-1-(hydroxymethyl)ethoxy]methyl)guanine in human lymphoblastoid cell lines infected with Epstein-Barr virus.  
Nov 1986

2/6/15 (Item 15 from file: 155)  
06042411 86196285

Selection and characterization of mutant S49 T-lymphoma cell lines resistant to phosphonoformic acid: evidence for inhibition of ribonucleotide reductase.  
May 1986  
? t s3/6/1-15

3/6/1 (Item 1 from file: 155)  
04784920 85207834

Photoaffinity labeling of a viral induced protein from tobacco. Characterization of nucleotide-binding properties.  
Jun 25 1985

3/6/2 (Item 2 from file: 155)  
04584743 81076576

Specific changes in Q-ribonucleoside containing transfer RNA species during Friend leukemia cell erythroid differentiation.  
Aug 11 1980

3/6/3 (Item 3 from file: 155)  
02334944 77031809

Replicative bacteriophage DNA synthesis in plasmolyzed T4-infected cells: evidence for two independent pathways to DNA.

Oct 1976

3/6/4 (Item 1 from file: 5)  
04761042 BIOSIS NO.: 000080064169  
PHOTOAFFINITY LABELING OF A **VIRAL** INDUCED PROTEIN FROM TOBACCO  
NICOTIANA-TABACUM CULTIVAR TURKISH-SAMSUN CHARACTERIZATION OF  
NUCLEOTIDE-BINDING PROPERTIES  
1985

3/6/5 (Item 1 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Induction of viral mutation by incorporation of miscoding ribonucleoside  
analogues into viral RNA

3/6/6 (Item 1 from file: 654)  
02904238  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) GLYCOPROTEIN B (GB) AND USES  
THEREOF  
FULL TEXT: 4005 lines

3/6/7 (Item 2 from file: 654)  
02901620  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) INTERLEUKIN 6 (IL-6) AND  
USES THEREOF  
FULL TEXT: 3965 lines

3/6/8 (Item 3 from file: 654)  
02899010  
VIRION PROTEIN 26 FROM KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS, DNA  
ENCODING SAME AND USES THEREOF  
FULL TEXT: 2244 lines

3/6/9 (Item 4 from file: 654)  
02899006  
2'-MODIFIED OLIGONUCLEOTIDES  
FULL TEXT: 3827 lines

3/6/10 (Item 5 from file: 654)  
02898471  
BIO-OLIGOMER LIBRARIES AND A METHOD OF USE THEREOF  
FULL TEXT: 2660 lines

3/6/11 (Item 6 from file: 654)  
02893545  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) **VIRAL** MACROPHAGE  
INFLAMMATORY PROTEIN-1.ALPHA. II (VMIP-1.ALPHA. II) AND USES THEREOF  
FULL TEXT: 3892 lines

3/6/12 (Item 7 from file: 654)  
02893525  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) INTERLEUKIN 6 (IL-6) AND  
USES THEREOF  
FULL TEXT: 4609 lines

3/6/13 (Item 8 from file: 654)

02893362

ANTIVIRAL PHOSPHONOMETHOXYALKYLENE PURINE AND PYRIMIDINE DERIVATIVES  
FULL TEXT: 1610 lines

3/6/14 (Item 9 from file: 654)

02892879

GLYCOPROTEIN L AND GLYCOPROTEIN M FROM KAPOSI'S SARCOMA ASSOCIATED  
HERPESVIRUS, DNA ENCODING SAME AND USES THEREOF  
FULL TEXT: 2735 lines

3/6/15 (Item 10 from file: 654)

02888043

POLYPEPTIDES FROM KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS, DNA ENCODING  
SAME AND USES THEREOF  
FULL TEXT: 5870 lines  
? ds

Set	Items	Description
S1	871	RIBONUCLEOSIDE AND (ANALOG OR ANALOGS)
S2	276	S1 AND (VIRUS OR VIRAL)
S3	141	S2 AND (INCORPORATE OR INCORPORATION)
? s s2 and (mutation or mutations or mutate or mutates)		

	276	S2
	348473	MUTATION
	175799	MUTATIONS
	1207	MUTATE
	220	MUTATES
S4	77	S2 AND (MUTATION OR MUTATIONS OR MUTATE OR MUTATES)
? t s4/6/1-15		

4/6/1 (Item 1 from file: 155)

09519764 98241707

Resistance of human cytomegalovirus to benzimidazole ribonucleosides maps  
to two open reading frames: UL89 and UL56.  
Jun 1998

4/6/2 (Item 2 from file: 155)

06042411 86196285

Selection and characterization of mutant S49 T-lymphoma cell lines  
resistant to phosphonoformic acid: evidence for inhibition of  
ribonucleotide reductase.  
May 1986

4/6/3 (Item 3 from file: 155)

02334944 77031809

Replicative bacteriophage DNA synthesis in plasmolyzed T4-infected cells:  
evidence for two independent pathways to DNA.  
Oct 1976

4/6/4 (Item 1 from file: 5)

11486819 BIOSIS NO.: 199800268151

Resistance of human cytomegalovirus to benzimidazole ribonucleosides maps  
to two open reading frames: UL89 and UL56.  
1998

4/6/5 (Item 1 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. rts. reserv.

Induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA

4/6/6 (Item 1 from file: 654)  
02904238  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) GLYCOPROTEIN B (GB) AND USES THEREOF  
FULL TEXT: 4005 lines

4/6/7 (Item 2 from file: 654)  
02901620  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) INTERLEUKIN 6 (IL-6) AND USES THEREOF  
FULL TEXT: 3965 lines

4/6/8 (Item 3 from file: 654)  
02899006  
2'-MODIFIED OLIGONUCLEOTIDES  
FULL TEXT: 3827 lines

4/6/9 (Item 4 from file: 654)  
02893545  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) **VIRAL** MACROPHAGE INFLAMMATORY PROTEIN-1.ALPHA. II (VMIP-1.ALPHA. II) AND USES THEREOF  
FULL TEXT: 3892 lines

4/6/10 (Item 5 from file: 654)  
02893525  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) INTERLEUKIN 6 (IL-6) AND USES THEREOF  
FULL TEXT: 4609 lines

4/6/11 (Item 6 from file: 654)  
02888043  
POLYPEPTIDES FROM KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS, DNA ENCODING SAME AND USES THEREOF  
FULL TEXT: 5870 lines

4/6/12 (Item 7 from file: 654)  
02887996  
NUCLEAR MATRIX PROTEINS  
FULL TEXT: 1380 lines

4/6/13 (Item 8 from file: 654)  
02887974  
METHODS FOR HYBRIDIZATION ANALYSIS UTILIZING ELECTRICALLY CONTROLLED HYBRIDIZATION  
FULL TEXT: 1431 lines

4/6/14 (Item 9 from file: 654)  
02878456  
2'-O-ALKYLTHIOALKYL AND 2'-C-ALKYLTHIOALKYL-CONTAINING NUCLEIC ACIDS  
FULL TEXT: 871 lines

4/6/15 (Item 10 from file: 654)  
02878114  
RECOMBINANT LECTINS  
FULL TEXT: 2215 lines  
? t s3/7/5

3/7/5 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
(c) 1999 American Chemical Society. All rts. reserv.

129000579 CA: 129(1)579c PATENT  
Induction of viral mutation by incorporation of miscoding ribonucleoside  
analogues into viral RNA  
INVENTOR(AUTHOR): Loeb, Lawrence A.; Mullins, James I.  
LOCATION: USA  
ASSIGNEE: University of Washington; Loeb, Lawrence A.; Mullins, James I.  
PATENT: PCT International ; WO 9818324 A1 DATE: 19980507  
APPLICATION: WO 97US19670 (19971027) \*US 29404 (19961028) \*US 40535  
(19970227)  
PAGES: 60 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A01N-043/04A;  
A61K-031/70B; C12N-007/04B; C12N-007/06B; C12Q-001/68B; C12Q-001/70B  
DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN;  
CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; HU; ID; IL; IS; JP; KE; KG; KP; KR;  
KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO;  
RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; US; UZ; VN; YU; ZW;  
AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; KE; LS; MW; SD  
; SZ; UG; ZW; AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL;  
PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML; MR; NE; SN; TD; TG  
SECTION:  
CA201005 Pharmacology  
CA263XXX Pharmaceuticals  
IDENTIFIERS: ribonucleoside analog virus mutation antiviral, screening  
antiviral ribonucleoside analog virus mutation, combinatorial library  
antiviral ribonucleoside analog  
DESCRIPTORS:  
mRNA...  
analogs; induction of viral mutation by incorporation of miscoding  
ribonucleoside analogs into viral RNA, and screening method  
Antiviral agents... Anti-AIDS drugs... Combinatorial library... Coronavirus  
... Dengue virus... DNA... Drug delivery systems... Drug screening...  
Feline immunodeficiency virus... Feline leukemia virus... Hepatitis A virus  
... Hepatitis B virus... Hepatitis B... Hepatitis C virus... Hepatitis C...  
Human immunodeficiency virus 1... Human immunodeficiency virus 2... Human  
immunodeficiency virus... Human T-lymphotropic virus 1... Human  
T-lymphotropic virus 2... Influenza virus... Mutation... Nucleoside analogs  
... Oral drug delivery systems... Parenteral solutions(drug delivery  
systems)... Respiratory syncytial virus... Retroviridae... RNA viruses...  
RNA... Simian immunodeficiency virus... Tissue culture(animal)... Vesicular  
stomatitis virus...  
induction of viral mutation by incorporation of miscoding  
ribonucleoside analogs into viral RNA, and screening method  
T cell leukemia...  
inhibitors; induction of viral mutation by incorporation of miscoding  
ribonucleoside analogs into viral RNA, and screening method  
Mutagens...  
mutagenic potential; induction of viral mutation by incorporation of  
miscoding ribonucleoside analogs into viral RNA, and screening method  
Virus...  
mutation rate; induction of viral mutation by incorporation of  
miscoding ribonucleoside analogs into viral RNA, and screening method  
Reactive oxygen species...  
reaction; induction of viral mutation by incorporation of miscoding

ribonucleoside analogs into viral RNA, and screening method  
 Leukemia inhibitors...  
 T cell leukemia inhibitors; induction of viral mutation by  
 incorporation of miscoding ribonucleoside analogs into viral RNA, and  
 screening method  
 Nucleic acids...  
 templates; induction of viral mutation by incorporation of miscoding  
 ribonucleoside analogs into viral RNA, and screening method  
 CAS REGISTRY NUMBERS:  
 9014-24-8 and RNA polymerase II; induction of viral mutation by  
 incorporation of miscoding ribonucleoside analogs into viral RNA, and  
 screening method  
 66-22-8 73-24-5 biological studies, RNA nucleoside analog replacement of;  
 induction of viral mutation by incorporation of miscoding  
 ribonucleoside analogs into viral RNA, and screening method  
 58-61-7D 58-96-8D 65-46-3D 118-00-3D 957-77-7D 1867-73-8D 2140-64-9D  
 2140-69-4D 2149-76-0D 3066-86-2D 3868-31-3D 3868-32-4D 7803-88-5D  
 13007-43-7D 23899-77-6D 25130-29-4D 33962-59-3D 34218-77-4D  
 39007-51-7D 39007-52-8D 39638-73-8D 39708-01-5D 53337-88-5D  
 53337-89-6D 57294-74-3D 59495-20-4D 72055-62-0D 82773-20-4D  
 100997-68-0D 108060-85-1D 137248-64-7D 207340-54-3D 207340-56-5D  
 207340-58-7D derivs., induction of viral mutation by incorporation of  
 miscoding ribonucleoside analogs into viral RNA, and screening method  
 7782-44-7D free radicals, reaction; induction of viral mutation by  
 incorporation of miscoding ribonucleoside analogs into viral RNA, and  
 screening method  
 65-71-4 71-30-7 957-77-7 1867-73-8 2140-64-9 2140-69-4 2149-76-0  
 3066-86-2 3868-31-3 3868-32-4 7803-88-5 13007-43-7 23899-77-6  
 25130-29-4 33962-59-3 34218-77-4 39007-51-7 39007-52-8 39638-73-8  
 39708-01-5 53337-88-5 53337-89-6 57294-74-3 59495-20-4 72055-62-0  
 82773-20-4 100997-68-0 108060-85-1 137248-64-7 207340-54-3  
 207340-56-5 207340-58-7 induction of viral mutation by incorporation  
 of miscoding ribonucleoside analogs into viral RNA, and screening  
 method  
 65-46-3 73-40-5 RNA nucleoside analog replacement of; induction of viral  
 mutation by incorporation of miscoding ribonucleoside analogs into  
 viral RNA, and screening method  
 ? ds

Set	Items	Description
S1	871	RIBONUCLEOSIDE AND (ANALOG OR ANALOGS)
S2	276	S1 AND (VIRUS OR VIRAL)
S3	141	S2 AND (INCORPORATE OR INCORPORATION)
S4	77	S2 AND (MUTATION OR MUTATIONS OR MUTATE OR MUTATES)

? rd s2

>>>Duplicate detection is not supported for File 351.

>>>Duplicate detection is not supported for File 654.

>>>Records from unsupported files will be retained in the RD set.

...examined 50 records (50)  
 ...examined 50 records (100)  
 ...examined 50 records (150)  
 ...examined 50 records (200)  
 ...examined 50 records (250)  
 ...completed examining records  
 S5 264 RD S2 (unique items)  
 ? t s5/6/1-100

5/6/1 (Item 1 from file: 155)  
 09680820 98414643

Biochemical and kinetic analyses of NS5B RNA-dependent RNA polymerase of  
 the hepatitis C virus.



Sep 15 1998

5/6/2 (Item 2 from file: 155)  
09572290 98295761

Metabolism and metabolic actions of 6-methylpurine and 2-fluoroadenine in human cells.  
May 15 1998

5/6/3 (Item 3 from file: 155)  
09519764 98241707

Resistance of human cytomegalovirus to benzimidazole ribonucleosides maps to two open reading frames: UL89 and UL56.  
Jun 1998

5/6/4 (Item 4 from file: 155)  
09387674 98092286

DNA helicase activity of the hepatitis C virus nonstructural protein 3.  
Nov 15 1997

5/6/5 (Item 5 from file: 155)  
09166167 97402550

pH dependence of self-splicing by the group IA2 intron in a pre-mRNA derived from the nrdB gene of bacteriophage T4.  
Sep 1 1997

5/6/6 (Item 6 from file: 155)  
08972416 97210804

Design, synthesis, and antiviral evaluation of 2-chloro-5,6-dihalo-1-beta-D-ribofuranosylbenzimidazoles as potential agents for human cytomegalovirus infections.  
Feb 28 1997

5/6/7 (Item 7 from file: 155)  
08972414 97210802

Synthesis and antiproliferative and antiviral activity of carbohydrate-modified pyrrolo[2,3-d]pyridazin-7-one nucleosides.  
Feb 28 1997

5/6/8 (Item 8 from file: 155)  
08972412 97210800

Synthesis, antiproliferative and antiviral activity of imidazo[4,5-d]isothiazole nucleosides as 5:5 fused analogs of nebularine and 6-methylpurine ribonucleoside.  
Feb 28 1997

5/6/9 (Item 9 from file: 155)  
08612475 96264015

Inhibition of neurotropic mouse retrovirus replication in glial cells by synthetic oligo(2'-O-methyl)ribonucleoside phosphorothioates.  
Dec 1995

5/6/10 (Item 10 from file: 155)  
08386569 95378261

The in vitro translocase activity of lambda terminase and its subunits. Kinetic and biochemical analysis.

Aug 25 1995

5/6/11 (Item 11 from file: 155)  
07499537 93188169

Nucleotide sequence of the primer RNA for DNA replication of filamentous bacteriophages.  
Apr 1993

5/6/12 (Item 12 from file: 155)  
06629901 90249588

The metabolism of ribavirin in erythrocytes and nucleated cells.  
1990

5/6/13 (Item 13 from file: 155)  
06253455 86111810

Inhibition of herpes simplex **virus** DNA polymerase by purine **ribonucleoside** monophosphates.  
Feb 5 1986

5/6/14 (Item 14 from file: 155)  
06116075 87036919

Metabolic activation of 9-[[2-hydroxy-1-(hydroxymethyl)ethoxy]methyl]guanine in human lymphoblastoid cell lines infected with Epstein-Barr **virus**.  
Nov 1986

5/6/15 (Item 15 from file: 155)  
06042411 86196285

Selection and characterization of mutant S49 T-lymphoma cell lines resistant to phosphonoformic acid: evidence for inhibition of ribonucleotide reductase.  
May 1986

5/6/16 (Item 16 from file: 155)  
04784920 85207834

Photoaffinity labeling of a **viral** induced protein from tobacco. Characterization of nucleotide-binding properties.  
Jun 25 1985

5/6/17 (Item 17 from file: 155)  
04706450 85264705

Synthesis and biological activity of 6-azacadeguomycin and certain 3,4,6-trisubstituted pyrazolo[3,4-d]pyrimidine ribonucleosides.  
Aug 1985

5/6/18 (Item 18 from file: 155)  
04623422 83213318

Stimulation of calf thymus DNA alpha-polymerase by ATP.  
May 25 1983

5/6/19 (Item 19 from file: 155)  
04606085 82186636

Localization of the binding sites of prokaryotic and eukaryotic RNA polymerases on simian **virus** 40 DNA.  
May 1980

5/6/20 (Item 20 from file: 155)  
04584743 81076576

Specific changes in Q-ribonucleoside containing transfer RNA species during Friend leukemia cell erythroid differentiation.  
Aug 11 1980

5/6/21 (Item 21 from file: 155)  
04448779 81191941

Complexes of Rep protein with ATP and DNA as a basis for helicase action.  
May 25 1981

5/6/22 (Item 22 from file: 155)  
04429431 85009852

Effect of S-adenosylmethionine on human rotavirus RNA synthesis.  
Oct 1984

5/6/23 (Item 23 from file: 155)  
04389382 83047099

Capacity of deoxycytidine to selectively antagonize cytotoxicity of 5-halogenated **analogs** of deoxycytidine without loss of antiherpetic activity.  
Sep 1982

5/6/24 (Item 24 from file: 155)  
04370562 82033294

In vitro transcription catalyzed by heat-treated human rotavirus.  
Oct 1981

5/6/25 (Item 25 from file: 155)  
03715155 82146446

Basis for the differential action of aminonucleoside on normal and transformed human fibroblasts.  
Mar 1982

5/6/26 (Item 26 from file: 155)  
03239484 78130121

Termination of transcription by Escherichia coli RNA polymerase in vitro is affected by **ribonucleoside** triphosphate base **analogs**.  
Apr 10 1978

5/6/27 (Item 27 from file: 155)  
03238086 78098423

Enzymology of cells infected with herpes simplex **virus**  
Enzimologiya kletok, infitsirovannykh virusom prostogo gerpesa.  
Nov-Dec 1977

5/6/28 (Item 28 from file: 155)  
03206111 76010802

N6, O2'-dimethyladenosine a novel methylated **ribonucleoside** next to the 5' terminal of animal cell and **virus** mRNAs.  
Sep 18 1975

5/6/29 (Item 29 from file: 155)  
03074497 75146665

A poly(U) polymerase in tobacco leaves.

Apr 2 1975

5/6/30 (Item 30 from file: 155)  
03023674 76193626

Synthesis and biological studies of 3-(beta-D-ribofuranosyl)-2,3,-dihydro-6H-1,3-oxazine-2,6-dione, a new pyrimidine nucleoside **analog** related to uridine.  
May 1976

5/6/31 (Item 31 from file: 155)  
02334944 77031809

Replicative bacteriophage DNA synthesis in plasmolyzed T4-infected cells: evidence for two independent pathways to DNA.  
Oct 1976

5/6/32 (Item 1 from file: 5)  
08988823 BIOSIS NO.: 199396140324

Effect of synthetic fragments of immunodominant regions of HIV glycoproteins on oxidative metabolism of human neutrophils.  
1993

5/6/33 (Item 2 from file: 5)  
04761042 BIOSIS NO.: 000080064169

PHOTOAFFINITY LABELING OF A **VIRAL** INDUCED PROTEIN FROM TOBACCO NICOTIANA-TABACUM CULTIVAR TURKISH-SAMSUN CHARACTERIZATION OF NUCLEOTIDE-BINDING PROPERTIES  
1985

5/6/34 (Item 3 from file: 5)  
03877083 BIOSIS NO.: 000075055156

CAPACITY OF DEOXY CYTIDINE TO SELECTIVELY ANTAGONIZE CYTO TOXICITY OF 5 HALOGENATED **ANALOGS** OF DEOXY CYTIDINE WITHOUT LOSS OF ANTI HERPETIC ACTIVITY  
1982

5/6/35 (Item 4 from file: 5)  
03038709 BIOSIS NO.: 000070064327

SYNTHESIS IN-VITRO OF THE FULL LENGTH COMPLEMENT OF DEFECTIVE INTERFERING PARTICLE RNA OF VESICULAR STOMATITIS **VIRUS**  
1980

5/6/36 (Item 5 from file: 5)  
03025027 BIOSIS NO.: 000070050645

ROLE OF ATP IN IN-VITRO VACCINIA **VIRUS** RNA SYNTHESIS EFFECTS OF ADENOSINE 5'-BETA-GAMMA IMIDO TRI PHOSPHATE AND ADENOSINE 5'-O-3 THIO TRI PHOSPHATE  
1980

5/6/37 (Item 6 from file: 5)  
02956263 BIOSIS NO.: 000069064381

IN-VITRO SYNTHESIS OF THE FULL LENGTH COMPLEMENT OF THE NEGATIVE STRAND GENOME RNA OF VESICULAR STOMATITIS **VIRUS**  
1980

5/6/38 (Item 7 from file: 5)  
02717711 BIOSIS NO.: 000068028304

INITIATION OF RNA SYNTHESIS IN-VITRO BY VESICULAR STOMATITIS VIRUS  
ROLE OF ATP  
1979

5/6/39 (Item 8 from file: 5)  
02381904 BIOSIS NO.: 000065038937  
INHIBITION OF RNASE BY RIBO NUCLEOTIDES AND TRANSITION STATE ANALOGS  
IN CELL-FREE EXTRACTS FROM EHRlich ASCITES TUMOR CELLS  
1977

5/6/40 (Item 1 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Enhanced suppression of HIV-1 by the combination of cytidine nucleoside analogs and CTP synthase inhibitors

5/6/41 (Item 2 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA

5/6/42 (Item 3 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Method for inhibiting virus replication in mammalian cells using carbostyryl derivatives

5/6/43 (Item 4 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

(2R,4S,5S)-1-(Tetrahydro-4-hydroxy-5-methoxy-2-furanyl)thymine: a potent selective inhibitor of herpes simplex thymidine kinase

5/6/44 (Item 5 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Human immunodeficiency virus reverse transcriptase: purification and substrate properties

5/6/45 (Item 6 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Susceptibility of a herpes simplex virus ribonucleotide reductase null mutant to deoxyribonucleosides and antiviral nucleoside analogs

5/6/46 (Item 7 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Recombinant Escherichia coli for the manufacture of pyrimidine deoxyribonucleosides

5/6/47 (Item 8 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis and antiviral activity of monofluoro and difluoro analogs of

pyrimidine deoxyribonucleosides against human immunodeficiency virus (HIV-1)

5/6/48 (Item 9 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Anti-herpes simplex virus activity of 5-substituted 2-pyrimidinone nucleosides

5/6/49 (Item 10 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Synthesis and antiviral activity of various 3'-azido analogs of pyrimidine deoxyribonucleosides against human immunodeficiency virus (HIV-1, HTLV-III/LAV)

5/6/50 (Item 11 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Structure-activity studies on synthetic peptides inhibiting herpes simplex virus ribonucleotide reductase

5/6/51 (Item 12 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Inhibition of influenza virus A RNA polymerase activity by some 3'-amino-3'-deoxy- and 3'-azido-3'-deoxyribonucleoside-5'-triphosphates

5/6/52 (Item 13 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Phosphorylation of nucleoside analogs by equine herpesvirus type 1 pyrimidine deoxyribonucleoside kinase

5/6/53 (Item 14 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Structure-activity relationships among .alpha.-(N)-heterocyclic acyl thiosemicarbazones and related compounds as inhibitors of herpes simplex virus type 1-specified ribonucleoside diphosphate reductase

5/6/54 (Item 15 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Synthesis of 3'-azido- and 3'-amino-3'-deoxyarabinonucleoside 5'-triphosphates and their substrate properties in the system of polynucleotide synthesizing enzymes

5/6/55 (Item 16 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Characterization of the active site of ribonucleotide reductase of Escherichia coli, bacteriophage T4 and mammalian cells by inhibition studies with hydroxyurea analogs

5/6/56 (Item 17 from file: 399)

DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis and biological activities of 5-(hydroxymethyl, azidomethyl, or aminomethyl)-2'-deoxyuridine and related 5'-substituted analogs

5/6/57 (Item 18 from file: 399)

DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Enzymic basis for the selective inhibition of varicella-zoster virus by 5-halogenated analogs of deoxycytidine

5/6/58 (Item 19 from file: 399)

DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Recent studies on the antiviral and biochemical properties of 5-halo-5'-amino-deoxyribonucleosides

5/6/59 (Item 20 from file: 399)

DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Novel mechanism of resistance to folate analogs: ribonucleoside diphosphate reductase deficiency in bacteriophage T4

5/6/60 (Item 1 from file: 357)

0206331 DBA Accession No.: 97-01452

New oligonucleotides for inhibiting transcription of hepatitis C virus RNA - phosphorothioate oligonucleotide **analog** for use as a DNA probe for disease diagnosis or for use in disease and cancer therapy 1996

5/6/61 (Item 1 from file: 351)

010121179 \*\*Image available\*\*

WPI Acc No: 95-022430/199503

Title Terms: INHIBIT; REPLICA; REVERSE; TRANSCRIPTASE; DEPEND; **VIRUS**; UTILISE; COMPOUND; INTRACELLULAR; POOL; **DEOXYRIBONUCLEOSIDE**; PHOSPHATE

5/6/62 (Item 2 from file: 351)

009306582 \*\*Image available\*\*

WPI Acc No: 93-000018/199301

Title Terms: SUBSTITUTE; FURANOSIDE; COMPOUND; PREPARATION; MULTISTEP; PROCESS; HEXA; ENE; OL; FLUORO; HEXA; ENE; DIOL  
Index Terms/Additional Words: HEXENE; PROPARGYL; ALCOHOL; PROPENYL; HALIDE

5/6/63 (Item 3 from file: 351)

008122214

WPI Acc No: 90-009215/199002

Title Terms: PYRIDINE; THIO; HYDRAZONE; RIBONUCLEOTIDE; REDUCTASE; INHIBIT; SYNERGISTIC; COMBINATION; ANTIVIRAL; COMPOUND; TREAT; **VIRUS**; INFECT ; HERPES; **VIRUS**; INFECT

5/6/64 (Item 1 from file: 654)

02904238

KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) GLYCOPROTEIN B (GB) AND USES THEREOF

FULL TEXT: 4005 lines

5/6/65 (Item 2 f file: 654)  
02901621  
CAPPED SYNTHETIC RNA, **ANALOGS**, AND APTAMERS  
FULL TEXT: 1114 lines

5/6/66 (Item 3 from file: 654)  
02901620  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) INTERLEUKIN 6 (IL-6) AND  
USES THEREOF  
FULL TEXT: 3965 lines

5/6/67 (Item 4 from file: 654)  
02899018  
SYNTHONS FOR SYNTHESIS OF OLIGONUCLEOTIDE N3-P5 PHOSPHORAMIDATES  
FULL TEXT: 1933 lines

5/6/68 (Item 5 from file: 654)  
02899010  
VIRION PROTEIN 26 FROM KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS, DNA  
ENCODING SAME AND USES THEREOF  
FULL TEXT: 2244 lines

5/6/69 (Item 6 from file: 654)  
02899006  
2'-MODIFIED OLIGONUCLEOTIDES  
FULL TEXT: 3827 lines

5/6/70 (Item 7 from file: 654)  
02898471  
BIO-OLIGOMER LIBRARIES AND A METHOD OF USE THEREOF  
FULL TEXT: 2660 lines

5/6/71 (Item 8 from file: 654)  
02893545  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) **VIRAL** MACROPHAGE  
INFLAMMATORY PROTEIN-1.ALPHA. II (VMIP-1.ALPHA. II) AND USES THEREOF  
FULL TEXT: 3892 lines

5/6/72 (Item 9 from file: 654)  
02893525  
KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS (KSHV) INTERLEUKIN 6 (IL-6) AND  
USES THEREOF  
FULL TEXT: 4609 lines

5/6/73 (Item 10 from file: 654)  
02893362  
ANTIVIRAL PHOSPHONOMETHOXYALKYLENE PURINE AND PYRIMIDINE DERIVATIVES  
FULL TEXT: 1610 lines

5/6/74 (Item 11 from file: 654)  
02892879  
GLYCOPROTEIN L AND CLYCOPROTEIN M FROM KAPOSI'S SARCOMA ASSOCIATED  
HERPESVIRUS, DNA ENCODING SAME AND USES THEREOF  
FULL TEXT: 2735 lines



5/6/75 (Item 12 from file: 654)

02888043

POLYPEPTIDES FROM KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS, DNA ENCODING  
SAME AND USES THEREOF

FULL TEXT: 5870 lines

5/6/76 (Item 13 from file: 654)

02887996

NUCLEAR MATRIX PROTEINS

FULL TEXT: 1380 lines

5/6/77 (Item 14 from file: 654)

02887974

METHODS FOR HYBRIDIZATION ANALYSIS UTILIZING ELECTRICALLY CONTROLLED  
HYBRIDIZATION

FULL TEXT: 1431 lines

5/6/78 (Item 15 from file: 654)

02881974

MODIFIED OLIGONUCLEOTIDES, THEIR PREPARATION AND THEIR USE

FULL TEXT: 2366 lines

5/6/79 (Item 16 from file: 654)

02878456

2'-O-ALKYLTHIOALKYL AND 2'-C-ALKYLTHIOALKYL-CONTAINING NUCLEIC ACIDS

FULL TEXT: 871 lines

5/6/80 (Item 17 from file: 654)

02878114

RECOMBINANT LECTINS

FULL TEXT: 2215 lines

5/6/81 (Item 18 from file: 654)

02875136

NUCLEOSIDE ANALOGS

FULL TEXT: 2372 lines

5/6/82 (Item 19 from file: 654)

02875120

OLIGONUCLEOTIDES WITH ANTI-EPSTEIN-BARR VIRUS ACTIVITY

FULL TEXT: 2160 lines

5/6/83 (Item 20 from file: 654)

02875118

CAPPED NUCLEIC ACID OLIGOMERS THAT INHIBIT CAP-DEPENDENT TRANSCRIPTION OF  
THE INFLUENZA VIRUS ENDONUCLEASE

FULL TEXT: 911 lines

5/6/84 (Item 21 from file: 654)

02875101

OLIGONUCLEOTIDE N3'-P5' PHOSPHORAMIDATES: HYBRIDIZATION AND NUCLEASE  
RESISTANCE PROPERTIES

FULL TEXT: 2087 lines

5/6/85 (Item 22 from file: 654)

02867730

SYNTHESIS DEPROTECTION ANALYSIS AND PURIFICATION OF RNA AND RIBOZYMES  
FULL TEXT: 1399 lines

5/6/86 (Item 23 from file: 654)

02867723

KAPOSI'S SARCOMA-ASSOCIATED HERPES **VIRUS** (KSHV) INTERFERON CONSENSUS  
SEQUENCE BINDING PROTEIN (ICSBP) AND USES THEREOF  
FULL TEXT: 3991 lines

5/6/87 (Item 24 from file: 654)

02867426

UNIQUE ASSOCIATED KAPOSI'S SARCOMA **VIRUS** SEQUENCES AND USES THEREOF  
FULL TEXT: 3501 lines

5/6/88 (Item 25 from file: 654)

02867338

METHOD FOR THE DETECTION OF TARGET NUCLEIC ACID  
FULL TEXT: 770 lines

5/6/89 (Item 26 from file: 654)

02867329

OLIGONUCLEOTIDE SIZING USING CLEAVABLE PRIMERS  
FULL TEXT: 3272 lines

5/6/90 (Item 27 from file: 654)

02864218

LIPID NUCLEOTIDE **ANALOG** PRODRUGS FOR ORAL ADMINISTRATION  
FULL TEXT: 1158 lines

5/6/91 (Item 28 from file: 654)

02860602

METHOD FOR DETECTING PROSTATE CANCER USING A REAGENT WHICH BINDS PROSTATE  
CANCER-1 PROTEIN  
FULL TEXT: 1441 lines

5/6/92 (Item 29 from file: 654)

02860585

NUCLEIC ACID MEDIATED ELECTRON TRANSFER  
FULL TEXT: 2122 lines

5/6/93 (Item 30 from file: 654)

02856896

RNA OLIGONUCLEOTIDES THAT BIND HIV TAT PROTEIN  
FULL TEXT: 2056 lines

5/6/94 (Item 31 from file: 654)

02853399

MODIFIED INTERNUCLEOSIDE LINKAGES (II)  
FULL TEXT: 1850 lines

5/6/95 (Item 32 from file: 654)

02853257

MODIFIED RIBOZYMES

FULL TEXT: 1167 lines

5/6/96 (Item 33 from file: 654)  
02842969  
N-2 SUBSTITUTED PURINES IN OLIGONUCLEOTIDES  
FULL TEXT: 2806 lines

5/6/97 (Item 34 from file: 654)  
02842789  
COMPOSITION AND METHOD FOR THE TREATMENT OR PROPHYLAXIS OF VIRAL  
INFECTIONS USING MODIFIED OLIGODEOXYRIBONUCLEOTIDES  
FULL TEXT: 14719 lines

5/6/98 (Item 35 from file: 654)  
02842675  
ENZYMATIC DNA MOLECULES  
FULL TEXT: 2442 lines

5/6/99 (Item 36 from file: 654)  
02842639  
METHOD FOR SIMULTANEOUS IDENTIFICATION OF DIFFERENTIALLY EXPRESSED MRNAS  
AND MEASUREMENT OF RELATIVE CONCENTRATIONS  
FULL TEXT: 1423 lines

5/6/100 (Item 37 from file: 654)  
02839379  
DEPROTECTION OF RNA WITH ALKYLAMINE  
FULL TEXT: 1419 lines  
?  
PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES  
? t s5/7/1,3,6-9, 12, 13, 23, 26, 27, 30, 35, 40, 42, 43, 45, 60

5/7/1 (Item 1 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

09680820 98414643

Biochemical and kinetic analyses of NS5B RNA-dependent RNA polymerase of the hepatitis C virus.

Lohmann V; Roos A; Korner F; Koch JO; Bartenschlager R  
Institute for Virology, Johannes-Gutenberg University Mainz, Obere  
Zahlbacher Strasse 67, Mainz, 55131, Germany.

Virology (UNITED STATES) Sep 15 1998, 249 (1) p108-18, ISSN 0042-6822  
Journal Code: XEA

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The biochemical properties of the RNA-dependent RNA polymerase (RdRp) of the hepatitis C virus were analyzed. A hexahistidine affinity-tagged NS5B fusion protein was expressed with recombinant baculoviruses in insect cells and purified to near homogeneity. Enzymatic activity of the purified protein was inhibited by KCl or high concentrations of NaCl and was absolutely dependent on Mg<sup>2+</sup>, which could be replaced by Mn<sup>2+</sup>. NS5B was found to be processive and able to copy long heteropolymeric templates with an elongation rate of 150-200 nucleotides/min at 22 degreesC. Kinetic constants were determined for all four nucleoside triphosphates and different templates. In case of a heteropolymeric RNA template corresponding to the last 319 nucleotides of the hepatitis C virus genome, Km values for UTP, GTP, ATP, and CTP were approximately 1.0, approximately 0.5, approximately 10, and approximately 0.3 microM,

respectively. The profile of several inhibitors of RdRp activity and substrate **analogs** indicated that the enzyme has a strong preference for **ribonucleoside** 5'-triphosphates and that it closely resembles 3Dpol of picornaviruses. Copyright 1998 Academic Press.

5/7/3 (Item 3 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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09519764 98241707

Resistance of human cytomegalovirus to benzimidazole ribonucleosides maps to two open reading frames: UL89 and UL56.

Krosky PM; Underwood MR; Turk SR; Feng KW; Jain RK; Ptak RG; Westerman AC; Biron KK; Townsend LB; Drach JC

Department of Biologic and Materials Sciences, School of Dentistry, University of Michigan, Ann Arbor, Michigan 48109, USA.

J Virol (UNITED STATES) Jun 1998, 72 (6) p4721-8, ISSN 0022-538X  
Journal Code: KCV

Contract/Grant No.: U01-AI31718, AI, NIAID; M01RR00042, RR, NCRR; GM07767, GM, NIGMS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

2,5,6-Trichloro-1-beta-D-ribofuranosyl benzimidazole (TCRB) is a potent and selective inhibitor of human cytomegalovirus (HCMV) replication. TCRB acts via a novel mechanism involving inhibition of **viral** DNA processing and packaging. Resistance to the 2-bromo **analog** (BDCRB) has been mapped to the UL89 open reading frame (ORF), and this gene product was proposed as the **viral** target of the benzimidazole nucleosides. In this study, we report the independent isolation of **virus** that is 20- to 30-fold resistant to TCRB (isolate C4) and the characterization of the **virus**. The six ORFs known to be essential for **viral** DNA cleavage and packaging (UL51, UL52, UL56, UL77, UL89, and UL104) were sequenced from wild-type HCMV, strain Towne, and from isolate C4. Mutations were identified in UL89 (D344E) and in UL56 (Q204R). The mutation in UL89 was identical to that previously reported for **virus** resistant to BDCRB, but the mutation in UL56 is novel. Marker transfer analysis demonstrated that each of these mutations individually caused approximately 10-fold resistance to the benzimidazoles and that the combination of both mutations caused approximately 30-fold resistance. The rate and extent of replication of the mutants was the same as for wild-type **virus**, but the viruses were less sensitive to inhibition of DNA cleavage by TCRB. Mapping of resistance to UL56 supports and extends recent work showing that UL56 codes for a packaging motif binding protein which also has specific nuclease activity (E. Bogner et al., J. Virol. 72:2259-2264, 1998). Resistance which maps to two different genes suggests that their putative proteins interact and/or that either or both have a benzimidazole **ribonucleoside** binding site. The results also suggest that the gene products of UL89 and UL56 may be antiviral drug targets.

5/7/6 (Item 6 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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08972416 97210804

Design, synthesis, and antiviral evaluation of 2-chloro-5,6-dihalo-1-beta-D-ribofuranosylbenzimidazoles as potential agents for human cytomegalovirus infections.

Zou R; Drach JC; Townsend LB

Department of Medicinal Chemistry, College of Pharmacy, University of Michigan, Ann Arbor 48109-1065, USA.

J Med Chem (UNITED STATES) Feb 28 1997, 40 (5) p811-8, ISSN 0022-2623  
Journal Code: JOF

Contract/Grant No.: NO1-AI 42554, AI, NIAID; NO1-AI7264, AI, NIAID;

Languages: ENGLISH

Document type: JOURNAL ARTICLE

2-Chloro-5,6-difluorobenzimidazole (8) was prepared from 4,5-difluoro-2-nitroaniline (5) via successive reduction, cyclization, and diazotization reactions. 2-Chloro-5,6-dibromobenzimidazole (10) was obtained by a direct bromination of 2-chlorobenzimidazole (9) with bromine-water. 2-Chloro-5,6-diiodobenzimidazole (15) was synthesized by a stepwise transformation of the nitro functions of 2-chloro-5,6-dinitrobenzimidazole (11) into iodo groups via diazotization reactions. Ribosylation of 8, 10, and 15 gave the respective beta nucleosides 16a-c as the major products along with a small amount of the alpha anomers 17a-c. Deprotection of 16a-c afforded the corresponding free beta nucleosides 2-chloro-5,6-difluoro-1-beta-D-ribofuranosylbenzimidazole (2), 2-chloro-5,6-dibromo-1-beta-D-ribofuranosylbenzimidazole (3), and 2-chloro-5,6-diiodo-1-beta-D-ribofuranosylbenzimidazole (4). Similar deprotection of the alpha anomers (17a-c) resulted in a removal of the acetyl protecting groups and a concomitant cyclization to give the 2,2'-O-cyclonucleosides (18a-c). Most of the benzimidazole heterocycles, but not the difluoro **analog**, were active against human cytomegalovirus (HCMV) (IC50's = 3-40 microM) and herpes simplex virus type 1 (HSV-1) (IC50's = 50-90 microM). This activity, however, was not well separated from cytotoxicity, IC50's = 10-100 microM. The corresponding unsubstituted, the 5,6-dimethyl, and the 5,6-difluoro ribonucleosides (19, 20, and 2, respectively), were inactive against both viruses. Similar to the previously reported 2,5,6-trichloro **analog** (TCRB), the 5,6-dibromo **ribonucleoside** 3 was active against HCMV (IC50 approximately 4 microM) but more cytotoxic than TCRB. The 5,6-diiodo **analog** 4 also was active (IC50 approximately 2 microM) but more cytotoxic (IC50 = 10-20 microM) than either 3 or TCRB. The cyclonucleosides were inactive against both viruses and not cytotoxic, or slightly active with corresponding cytotoxicity. The order of activity against HCMV of the dihalobenzimidazole ribonucleosides was I approximately equal to Br approximately equal to Cl > > F > H = CH3. The order of cytotoxicity among the most active compounds, however, was I > Br > Cl, thereby establishing that TCRB had the best antiviral properties.

5/7/7 (Item 7 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

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08972414 97210802

Synthesis and antiproliferative and antiviral activity of carbohydrate-modified pyrrolo[2,3-d]pyridazin-7-one nucleosides.

Meade EA; Wotring LL; Drach JC; Townsend LB

Department of Medicinal Chemistry, College of Pharmacy, University of Michigan, Ann Arbor 48109-1065, USA.

J Med Chem (UNITED STATES) Feb 28 1997, 40 (5) p794-801, ISSN 0022-2623 Journal Code: JOF

Contract/Grant No.: U19-AI-31718, AI, NIAID; N01-AI-72641, AI, NIAID

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Sugar-modified **analogs** of 4-amino-1-(beta-D-ribofuranosyl)pyrrolo[2,3-d]pyridazin-7-one (1) and 4-amino-3-bromo-1-(beta-D-ribofuranosyl)pyrrolo[2,3-d]pyridazin-7-one (3) were prepared in an effort to obtain selective antiviral agents. Treatment of ethyl 3-cyano-1-(2,3,5-tri-O-benzyl-1-beta-D-arabinofuranosyl)pyrrole-2-carboxylate (6) with hydrazine afforded 4-amino-1-(2,3,5-tri-O-benzyl-1-beta-D-arabinofuranosyl)pyrrolo[2,3-d]pyridazin-7-one (7). Treatment of 7 with bromine afforded 4-amino-3-bromo-1-(2,3,5-tri-O-benzyl-beta-D-arabinofuranosyl)pyrrolo[2,3-d]pyridazin-7-one hydrobromide (9). The benzyl ether functions of 7 and 9 were removed with boron trichloride to afford 4-amino-1-(beta-D-arabinofuranosyl)pyrrolo[2,3-d]pyridazin-7-one (8) and its 3-bromo **analog** 10. 4-Amino-1-(2-deoxy-beta-D-erythro-pentofuranosyl)pyrrolo[2,3-d]pyridazin-7-

one (13) was prepared by the sodium salt compensation of ethyl 3-cyanopyrrole-2-carboxylate (5) with 2-deoxy-3,5-di-O-p-toluoyl-alpha-D-erythro-pentofuranosyl chloride (11) followed by ring annulation with hydrazine. Deprotection of ethyl 3-cyano-1-(2-deoxy-3,5-di-O-p-toluoyl-beta-D-erythro-pentofuranosyl)pyrrole-2-carboxylate (12) using sodium ethoxide furnished ethyl 1-(2-deoxy-beta-D-erythro-pentofuranosyl)-3-cyanopyrrole-2-carboxylate (14) which served as the starting material for the preparation of 4-amino-1-(2,3-dideoxy-beta-D-glycero-pentofuranosyl)pyrrolo [2,3-d] pyridazin-7-one (20). Selective protection of the 5'-hydroxyl group of 14 with tert-butyldimethylsilyl chloride followed by a Barton type deoxygenation sequence of the 3'-hydroxyl groups afforded ethyl 3-cyano-1-[2,3-dideoxy-5-O-tert-butyldimethylsilyl]-beta-D-glycero-pentofuranosyl]pyrrole-2-carboxylate (18). Deprotection of 18 with tetra-n-butylammonium fluoride and ring annulation with hydrazine afforded 20. The acyclic analog 4-amino-1-[(1,3-dihydroxy-2-propoxy)methyl]pyrrolo[2,3-d]pyridazin-7-one (24) was prepared via the sodium salt glycosylation of 5 with (1,3-dihydroxy-2-propoxy)methyl bromide (22) followed by a ring annulation with hydrazine. N-Bromosuccinimide treatment of 13, 20, and 25 afforded the 3-bromo derivatives 15, 21, and 25. Evaluation of these compounds in L1210, HFF, and KB cells showed that the sugar-modified analogs all were less cytotoxic than their corresponding ribonucleoside analogs. The compounds also were less active against human cytomegalovirus (HCMV) and herpes simplex virus type 1 (HSV-1). The 3-bromo derivatives were much more active than the 3-unsubstituted analogs in both the cytotoxicity, and antiviral assays. However, there was only modest separation between activity against HCMV and cytotoxicity and there was virtually no selectivity for activity against HSV-1.

5/7/8 (Item 8 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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08972412 97210800

Synthesis, antiproliferative and antiviral activity of imidazo[4,5-d]isothiazole nucleosides as 5:5 fused analogs of nebularine and 6-methylpurine ribonucleoside.

Swayze EE; Drach JC; Wotring LL; Townsend LB  
Department of Chemistry, College of Literature, Sciences, and the Arts,  
University of Michigan, Ann Arbor 48109, USA.

J Med Chem (UNITED STATES) Feb 28 1997, 40 (5) p771-84, ISSN  
0022-2623 Journal Code: JOF

Contract/Grant No.: NO1-AI72641, AI, NIAID; UO1-AI31718, AI, NIAID

Languages: ENGLISH

Document type: JOURNAL ARTICLE

A series of imidazo[4,5-d]isothiazole nucleosides related to the antibiotic nebularine and the highly cytotoxic 6-methyl-9-beta-D-ribofuranosylpurine have been synthesized from the corresponding heterocycles. The sodium salt glycosylation of the imidazo[4,5-d]isothiazoles proceeded smoothly, giving mixtures of N-4 and N-6 regioisomers in generally good yields. The protected derivatives were deblocked using standard conditions to afford the desired imidazo[4,5-d]-isothiazole nucleosides, usually as crystalline solids. None of the new nucleosides or heterocycles displayed selective activity against human cytomegalovirus (HCMV) or herpes simplex virus type 1 (HSV-1). The N-6 glycosylated imidazo[4,5-d]isothiazoles were completely inactive up to the highest concentration tested. The N-6 glycosylated imidazo[4,5-d]isothiazoles also were inactive in antiproliferative and cytotoxicity assays, except for 3-methyl-6-beta-D-ribofuranosylimidazo[4,5-d]isothiazole (15a) and 5-(benzylthio)-6-(2-deoxy-beta-D-ribofuranosyl)imidazo[4,5-d]isothiazole (5e), which showed moderate inhibition of L1210 cell growth. However, the heterocycles and several of the N-4 glycosylated derivatives were toxic to HFF, KB and L1210 cells; compounds with 5-benzylthio substituents were the most cytotoxic agents in this series.

5/7/9 (Item 9 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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08612475 96264015

Inhibition of neurotropic mouse retrovirus replication in glial cells by synthetic oligo(2'-O-methyl)**ribonucleoside** phosphorothioates.

Takase-Yoden S; Shibahara S; Morisawa H; Watanabe R

Institute of Life Science, Soka University, Hachioji, Tokyo, Japan.

Antiviral Res (NETHERLANDS) Dec 1995, 28 (4) p359-68, ISSN 0166-3542  
Journal Code: 6I7

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Synthetic oligo(2'-O-methyl)**ribonucleoside** phosphorothioate, FS-25, which is complementary to the splicing acceptor site of neurotropic mouse retrovirus (FrC6 **virus**), and non-complementary **analogs** including 2'-O-methylinosine homo oligomer (MIS-25), both inhibited **viral** infection in glial cells. In addition, FS-25 and MIS-25 partially suppressed **viral** production of glial cells persistently infected with FrC6 **virus**. Both FS-25 and MIS-25 potently inhibited reverse transcriptase activity of the FrC6 **virus** in a cell-free system. Addition of these compounds before or after second-round infection of the FrC6 **virus** inhibited the accumulation of unintegrated **viral** DNA. These results indicate that these compounds fundamentally inhibit retrovirus production in glial cells in the same manner in which they inhibit HIV production, by blocking several **viral** replication pathways including fresh infection, second-round infection, and reverse transcription of the **viral** genome. Our novel neurotropic retrovirus is a useful experimental model for the development of drugs against HIV infection.

5/7/12 (Item 12 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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06629901 90249588

The metabolism of ribavirin in erythrocytes and nucleated cells.

Page T; Connor JD

Department of Pediatrics, University of California, San Diego, La Jolla 92093.

Int J Biochem (ENGLAND) 1990, 22 (4) p379-83, ISSN 0020-711X  
Journal Code: E4S

Languages: ENGLISH

Document type: JOURNAL ARTICLE

1. The metabolism of the broad-spectrum antiviral drug ribavirin was examined in intact human erythrocytes, cultured skin fibroblasts and EBV-transformed lymphoblasts. At an extracellular ribavirin concentration of 35 microM all the cell types produced ribavirin mono-, di- and triphosphate, with the nucleotide concentration reaching half-maximum in 210, 245 and 267 min for fibroblasts, lymphoblasts and erythrocytes, respectively. The ratio of mono-, di- and triphosphates was ca 4:1:40 in fibroblasts, 3:1:8 in lymphoblasts and 1:5:17 in erythrocytes. 2. When ribavirin was removed from the medium, the half-life of ribavirin nucleotides was less than 2 hr in fibroblasts and lymphoblasts; but greater than 24 hr in erythrocytes. 3. In energy-starved erythrocytes, the catabolism of ribavirin nucleotides closely followed the catabolism of adenine nucleotides. 4. None of these cell types excreted appreciable amounts of the ribavirin catabolites triazole carboxamide, triazole carboxylate or triazole carboxylate **ribonucleoside**. 5. Cells deficient in adenosine kinase produced greater than 4% of the ribavirin nucleotides of normal controls. 6. The nucleated cells quickly hydrolyzed ribavirin 5'monophosphate to ribavirin, whereas this activity was

negligible in erythrocytes.

5/7/13 (Item 13 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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06253455 86111810

Inhibition of herpes simplex **virus** DNA polymerase by purine **ribonucleoside** monophosphates.

Frank KB; Cheng YC

J Biol Chem (UNITED STATES) Feb 5 1986, 261 (4) p1510-3, ISSN 0021-9258 Journal Code: HIV

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Purine **ribonucleoside** monophosphates were found to inhibit chain elongation catalyzed by herpes simplex **virus** (HSV) DNA polymerase when DNA template-primer concentrations were rate-limiting. Inhibition was fully competitive with DNA template-primer during chain elongation; however, DNA polymerase-associated exonuclease activity was inhibited noncompetitively with respect to DNA. Combinations of 5'-GMP and phosphonoformate were kinetically mutually exclusive in dual inhibitor studies. Pyrimidine nucleoside monophosphates and deoxynucleoside monophosphates were less inhibitory than purine riboside monophosphates. The monophosphates of 9-beta-D-arabinofuranosyladenine, Virazole (1-beta-D-ribofuranosyl-1,2,4-triazole-3-carboxamide), 9-(2-hydroxyethoxymethyl)guanine, and 9-(1,3-dihydroxy-2-propoxymethyl)guanine exerted little or no inhibition. In contrast to HSV DNA polymerase, human DNA polymerase alpha was not inhibited by purine **ribonucleoside** monophosphates. These studies suggest the possibility of a physiological role of purine **ribonucleoside** monophosphates as regulators of herpesvirus DNA synthesis and a new approach to developing selective anti-herpesvirus compounds.

5/7/23 (Item 23 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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04389382 83047099

Capacity of deoxycytidine to selectively antagonize cytotoxicity of 5-halogenated **analogs** of deoxycytidine without loss of antiherpetic activity.

Fox LM; Mekras JA; Bagwell CB; Greer SB

Antimicrob Agents Chemother (UNITED STATES) Sep 1982, 22 (3) p431-41, ISSN 0066-4804 Journal Code: 6HK

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Enzyme kinetic studies from this laboratory (M. Dobersen and S. Greer, Biochemistry 17:920-928, 1978) suggested that deoxycytidine could antagonize the toxicity of 5-halogenated **analogs** of deoxycytidine without interfering with their antiviral activity. Antagonism by deoxycytidine of the toxicity of 5-chlorodeoxycytidine without impairing its anti-herpes simplex **virus** type 2 activity is demonstrated in the present studies. Tetrahydrouridine, an inhibitor of cytidine deaminase, was utilized. The high Km for deoxycytidine (0.6 mM) with respect to the herpes pyrimidine nucleoside kinase as compared with the low Km for 5-chlorodeoxycytidine (1.1 microM) accounts for the absence of antagonism of the antiviral activity. The high Km for 5-chlorodeoxycytidine (56 microM) as compared with the low Km of deoxycytidine (2 microM) with respect to mammalian deoxycytidine kinase accounts, in great part, for the antagonism of toxicity. In addition, antagonism of toxicity by deoxycytidine is the result of factors other than the kinetic parameters of nucleoside kinases, as indicated by its antagonism of the cytotoxicity of 5-chlorodeoxyuridine. This may be attributed to replenishment of low dCTP



pools, diminished because of effector inhibition of **ribonucleoside** diphosphate reductase by Cl-dUTP. Resistance of the herpes-encoded enzymes to effector control may also play a role in the selective antagonism. Cell culture studies with high concentrations of tetrahydrouridine and 2'-deoxytetrahydrouridine suggest that competition by deoxycytidine for deaminases may not play a major role. The fact that deoxycytidine antagonizes the toxicity of chlorodeoxyuridine also argues against competition for the deaminases as a major reason for its effect. Limited studies with a topical herpes simplex virus type 2 infection system indicate heightened efficacy of 5-chlorodeoxycytidine (and tetrahydrouridine) when deoxycytidine is coadministered. The concepts of selective antagonism of a chemotherapeutic agent derived from these studies may be applied to other approaches that extend beyond viral chemotherapy.

5/7/26 (Item 26 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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03239484 78130121  
Termination of transcription by Escherichia coli RNA polymerase in vitro is affected by **ribonucleoside** triphosphate base **analogs**.  
Neff NF; Chamberlin MJ  
J Biol Chem (UNITED STATES) Apr 10 1978, 253 (7) p2455-60, ISSN 0021-9258 Journal Code: HIV  
Languages: ENGLISH  
Document type: JOURNAL ARTICLE

5/7/27 (Item 27 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

03238086 78098423  
Enzymology of cells infected with herpes simplex virus]  
Enzimologiya kletok, infitsirovannykh virusom prostogo gerpesa.  
Petrovich IuA; Terekhina NA  
Vopr Virusol (USSR) Nov-Dec 1977, (6) p643-9, ISSN 0507-4088  
Journal Code: XL8  
Languages: RUSSIAN  
Document type: JOURNAL ARTICLE

5/7/30 (Item 30 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

03023674 76193626  
Synthesis and biological studies of 3-(beta-D-ribofuranosyl)-2,3,-dihydro-6H-1,3-oxazine-2,6-dione, a new pyrimidine nucleoside **analog** related to uridine.  
Chwang TL; Wood WF; Parkhurst JR; Nesnow S; Danenberg PV; Heidelberger C  
J Med Chem (UNITED STATES) May 1976, 19 (5) p643-7, ISSN 0022-2623  
Journal Code: JOF  
Languages: ENGLISH  
Document type: JOURNAL ARTICLE  
Reaction of the trimethylsilyl derivative of 2,3-dihydro-6H-1,3-oxazine-2,6-dione (2, "uracil anhydride") with protected 1-O-acetylribofuranoses in the presence of stannic chloride gave the corresponding block nucleosides. 3-(2,3-5-Tri-O-2',2',2'-trichloroethoxycarbonyl-beta-d-ribofuranosyl)-2,3-dihydro-6H-1,3-oxazine-2,6-dione (4c) thus prepared from the protected sugar 3c, 1-O-acetyl-2,3,5-tri-O-(2,2,2-trichloroethoxycarbonyl)ribofuranose, gave, on removal of the protecting groups with zinc dust, 3-(beta-d-ribofuranosyl)-2,3-dihydro-6H-1,3-oxazine-2,6-dione (1). The

structure of 1 was confirmed by uv, ir, NMR, and CD spectral data and was shown to be an N nucleoside. Uracil anhydride, 2, and to a lesser extent, its **ribonucleoside** 1 exert a moderate growth inhibition of mouse leukemia L5178Y, HeLa, and Novikoff hepatoma cells in culture. Both compounds produce weak inhibition of vaccinia viral replication in HeLa cells.

5/7/35 (Item 4 from file: 5)  
DIALOG(R)File 5:BIOSIS PREVIEWS(R)  
(c) 1999 BIOSIS. All rts. reserv.

03038709 BIOSIS NO.: 000070064327  
SYNTHESIS IN-VITRO OF THE FULL LENGTH COMPLEMENT OF DEFECTIVE INTERFERING PARTICLE RNA OF VESICULAR STOMATITIS **VIRUS**

AUTHOR: CHANDRA P K; KANG C Y; BANERJEE A K  
AUTHOR ADDRESS: DEP. CELL. BIOL., ROCHE INST. MOL. BIOL., NUTLEY, N.J.  
07110, USA.

JOURNAL: PROC NATL ACAD SCI U S A 77 (7). 1980. 3927-3931.  
FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the United States of America  
CODEN: PNASA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

**ABSTRACT:** Under appropriate reaction conditions in vitro, 4 different defective-interfering particles of vesicular stomatitis **virus** synthesized the full-length complement of their RNA. The reaction involved preinitiation of the core particles with ATP and CTP, followed by RNA chain elongation in the presence of the .beta.,.gamma.-imido **analog** of ATP, AdoPP[NH]P [adenosine 5'-(.beta.-.gamma.-imido) triphosphate], and the 3 normal **ribonucleoside** triphosphates. By hybridization of the in vitro synthesized plus strand with the standard genome RNA followed by RNase treatment of the heteroduplexes, the RNA of a defective-interfering particle derived from the 3' end of the genome RNA was shown to have evolved by an internal deletion of the standard genome.

5/7/40 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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129104199 CA: 129(9)104199v **PATENT**  
Enhanced suppression of HIV-1 by the combination of cytidine nucleoside analogs and CTP synthase inhibitors  
INVENTOR(AUTHOR): Gao, Wen-yi; Johns, David G.; Mitsuya, Hiroaki; Marquez, Victor  
LOCATION: USA  
ASSIGNEE: United States Dept. of Health and Human Services  
PATENT: PCT International ; WO 9831375 A1 DATE: 19980723  
APPLICATION: WO 98US784 (19980120) \*US 33918 (19970121)  
PAGES: 47 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A61K-031/70A; A61K-031/505B DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; HU; IL; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; UZ; VN; YU; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW; SD; SZ; UG; ZW; AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML; MR; NE; SN; TD; TG  
SECTION:  
CA201005 Pharmacology  
CA263XXX Pharmaceuticals

IDENTIFIERS: cytidine nucleoside analog combination      iviral HIV, CTP  
synthase inhibitor combination antiviral HIV

DESCRIPTORS:

Antiviral agents... Drug delivery systems... Drug resistance... Hepatitis B  
virus... Human immunodeficiency virus 1... Human immunodeficiency virus 2  
... Human T-lymphotropic virus 1... Human T-lymphotropic virus 2...  
Retroviridae... Simian immunodeficiency virus... Synergistic drug  
interactions...

cytidine nucleoside analog-CTP synthase inhibitor combination for  
inhibition of retrovirus or virus using reverse transcriptase  
Deoxyribonucleoside triphosphates...

pool; cytidine nucleoside analog-CTP synthase inhibitor combination  
for inhibition of retrovirus or virus using reverse transcriptase

CAS REGISTRY NUMBERS:

65-46-3D analogs, cytidine nucleoside analog-CTP synthase inhibitor  
combination for inhibition of retrovirus or virus using reverse  
transcriptase  
7481-89-2 9039-45-6 9068-38-6 23205-42-7 90597-22-1 134678-17-4  
cytidine nucleoside analog-CTP synthase inhibitor combination for  
inhibition of retrovirus or virus using reverse transcriptase  
3056-17-5 30516-87-1 69655-05-6 85326-06-3 147318-81-8 HIV resistant  
to; cytidine nucleoside analog-CTP synthase inhibitor combination for  
inhibition of retrovirus or virus using reverse transcriptase  
9023-56-7 inhibitors; cytidine nucleoside analog-CTP synthase inhibitor  
combination for inhibition of retrovirus or virus using reverse  
transcriptase  
365-08-2 1927-31-7 2056-98-6 2564-35-4 pool; cytidine nucleoside  
analog-CTP synthase inhibitor combination for inhibition of retrovirus  
or virus using reverse transcriptase

5/7/42      (Item 3 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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127288158      CA: 127(21)288158u      PATENT  
Method for inhibiting virus replication in mammalian cells using  
carbostyryl derivatives  
INVENTOR(AUTHOR): Gelfand, Erwin W.; Terada, Naohiro  
LOCATION: Japan,  
ASSIGNEE: Otsuka Pharmaceutical Co., Ltd.  
PATENT: United States ; US 5670520 A      DATE: 19970923  
APPLICATION: US 619592 (19960326) \*US 283707 (19940801) \*WO 95US9141  
(19950728)  
PAGES: 38 pp. Cont.-in-part of U.S. 5,504,093.      CODEN: USXXAM      LANGUAGE:  
English      CLASS: 514314000; A01N-043/42A

SECTION:

CA201005 Pharmacology  
CA263XXX Pharmaceuticals

IDENTIFIERS: carbostyryl deriv virus replication inhibition, nucleoside  
nucleobase transport inhibition carbostyryl deriv, vesnarinone nucleoside  
nucleobase transport inhibition virucide, tablet vesnarinone virucide

DESCRIPTORS:

Drug interactions...  
additive; carbostyryl derivs. for inhibiting nucleoside and nucleobase  
transport and virus replication in mammalian cells, and combinations  
with other agents  
Proteins(specific proteins and subclasses)...  
BHRF-1; carbostyryl derivs. for inhibiting nucleoside and nucleobase  
transport and virus replication in mammalian cells  
Antiviral agents... bcl-2 protein... BZLF1 transcription factor... Cell  
cycle... Cell proliferation... Deoxyribonucleoside triphosphates... DNA  
viruses... DNA... EBNA-2(antigen)... Human herpesvirus 1... Human  
herpesvirus 2... Human herpesvirus 3... Human herpesvirus 4... Human  
herpesvirus 5... Human herpesvirus 6... Human immunodeficiency virus 1...

Human immunodeficiency virus 2... Human immunodeficiency virus... Human  
T-lymphotropic virus... Nucleic acid bases... Nucleoside, biological  
studies... Phosphorylation(biological)... RNA viruses... RNA...  
Tablets(drug delivery systems)... Transport(biological)...  
carbostyryl derivs. for inhibiting nucleoside and nucleobase transport  
and virus replication in mammalian cells  
Synergistic drug interactions...  
carbostyryl derivs. for inhibiting nucleoside and nucleobase transport  
and virus replication in mammalian cells, and combinations with other  
agents  
Antigens...  
EA (early antigen), EA-D; carbostyryl derivs. for inhibiting nucleoside  
and nucleobase transport and virus replication in mammalian cells  
Latent membrane protein...  
LMP1; carbostyryl derivs. for inhibiting nucleoside and nucleobase  
transport and virus replication in mammalian cells  
Nucleoside analogs...  
phosphorylation; carbostyryl derivs. for inhibiting nucleoside and  
nucleobase transport and virus replication in mammalian cells  
Proteins(specific proteins and subclasses)...  
p24, HIV-1; carbostyryl derivs. for inhibiting nucleoside and  
nucleobase transport and virus replication in mammalian cells  
Transcription factors...  
R; carbostyryl derivs. for inhibiting nucleoside and nucleobase  
transport and virus replication in mammalian cells  
CAS REGISTRY NUMBERS:  
50-89-5 58-61-7 66-22-8 73-24-5 biological studies, carbostyryl derivs.  
for inhibiting nucleoside and nucleobase transport and virus  
replication in mammalian cells  
58-32-2 58-96-8 70-51-9 316-46-1 365-07-1 365-08-2 491-97-4  
1927-31-7 2056-98-6 2564-35-4 9002-06-6 29706-85-2 38966-21-1  
81840-15-5 92586-35-1 106060-89-3 carbostyryl derivs. for inhibiting  
nucleoside and nucleobase transport and virus replication in mammalian  
cells  
3056-17-5 7481-89-2 30516-87-1 59277-89-3 69655-05-6 82410-32-0  
134678-17-4 carbostyryl derivs. for inhibiting nucleoside and  
nucleobase transport and virus replication in mammalian cells, and  
combinations with other agents  
59-31-4D derivs., carbostyryl derivs. for inhibiting nucleoside and  
nucleobase transport and virus replication in mammalian cells

5/7/43 (Item 4 from file: 399)  
DIALOG(R) File 399:CA SEARCH(R)  
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120271046 CA: 120(21)271046p JOURNAL  
(2R, 4S, 5S)-1-(Tetrahydro-4-hydroxy-5-methoxy-2-furanyl)thymine: a potent  
selective inhibitor of herpes simplex thymidine kinase  
AUTHOR(S): Kim, Choung Un; Misco, Peter F.; Luh, Bing Y.; Terry, Brian;  
Bisacchi, Gregory; Mansuri, Muzammil M.  
LOCATION: Bristol-Myers Squibb Pharm. Res. Inst., Wallingford, CT,  
06492-7660, USA  
JOURNAL: Bioorg. Med. Chem. Lett. DATE: 1993 VOLUME: 3 NUMBER: 8  
PAGES: 1571-6 CODEN: BMCLE8 ISSN: 0960-894X LANGUAGE: English  
SECTION:  
CA233009 Carbohydrates  
CA201XXX Pharmacology  
IDENTIFIERS: thymidine analog prepn virucide, deoxyribonucleoside prepn  
virucide, glycal stereoselective oxidative addn alc, nucleoside deoxyribo  
prepn virucide  
DESCRIPTORS:  
Virucides and Virustats... Virus, animal...  
inhibition of herpes simplex virus type 1 thymidine kinase by C-4  
alkoxy thymidine analogs

Nucleosides, biological studies...

prepn. of C-4 alkoxy thymidine analogs as inhibitors of herpes simplex thymidine kinase

Addition reaction... Stereochemistry...

stereoselective oxidative addn. of alcs. to furanoid glycal nucleoside in prepn. of virucide C-4 alkoxy thymidine analogs

CAS REGISTRY NUMBERS:

154742-73-1P 154742-74-2P 154742-75-3P 154742-76-4P 154742-77-5P  
154742-78-6P 154742-79-7P 154742-80-0P 154742-81-1P 154742-82-2P

154742-83-3P 154742-84-4P 154742-85-5P 154742-86-6P prepn. and inhibition of herpes simplex thymidine kinase by

154742-72-0 prepn. crystal structure of

9002-06-6 prepn. of (tetrahydrohydroxymethoxyfuranyl)thymines as inhibitors for

60-12-8 122-97-4 reactant, in prepn. of C-4 alkoxy thymidine analogs as inhibitors of herpes simplex thymidine kinase

37076-62-3 stereoselective oxidative addn. of alcs. to furanoid glycal nucleoside in prepn. of inhibitors of herpes simplex thymidine kinase

5/7/45 (Item 6 from file: 399)

DIALOG(R) File 399:CA SEARCH(R)

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116050953 CA: 116(7)50953x JOURNAL

Susceptibility of a herpes simplex virus ribonucleotide reductase null mutant to deoxyribonucleosides and antiviral nucleoside analogs

AUTHOR(S): Yamada, Yoshinari; Yamamoto, Naohiko; Daikoku, Tohru; Nishiyama, Yukihiro

LOCATION: Sch. Med., Nagoya Univ., Nagoya, Japan, 466

JOURNAL: Microbiol. Immunol. DATE: 1991 VOLUME: 35 NUMBER: 8 PAGES: 681-6 CODEN: MIIMDV ISSN: 0385-5600 LANGUAGE: English

SECTION:

CA201005 Pharmacology

IDENTIFIERS: herpes virus ribonucleotide reductase antiviral nucleoside, deoxyribonucleoside herpes ribonucleotide reductase antiviral

DESCRIPTORS:

Nucleosides, analogs, biological studies...

antiviral, herpes simplex virus ribonucleotide reductase null mutant sensitivity to

Virucides and Virustats...

herpes simplex virus ribonucleotide reductase null mutant sensitivity to deoxyribonucleosides and nucleoside analogs as

Nucleosides, deoxyribo-, biological studies...

herpes simplex virus ribonucleotide reductase null mutant susceptibility to, as virucides

Virus, animal, herpes simplex 1...

ribonucleotide reductase null mutant, deoxyribonucleosides and antiviral nucleoside analog toxicity to

CAS REGISTRY NUMBERS:

127-07-1 147-94-4 605-23-2 5536-17-4 59277-89-3 77181-69-2 82410-32-0  
138481-50-2 herpes simplex virus ribonucleotide reductase null mutant

susceptibility to

9040-57-7 of herpes simplex virus null mutant, deoxyribonucleosides and antiviral nucleoside analogs toxicity to

5/7/60 (Item 1 from file: 357)

DIALOG(R) File 357:Derwent Biotechnology Abs

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0206331 DBA Accession No.: 97-01452 PATENT

New oligonucleotides for inhibiting transcription of hepatitis C

virus RNA - phosphorothioate oligonucleotide analog for use

as a DNA probe for disease diagnosis or for use in disease and cancer

therapy

AUTHOR: Cook P D; Ho G

CORPORATE SOURCE: Carlsbad, CA, USA.

PATENT ASSIGNEE: ISIS-Pharm. 1996

PATENT NUMBER: US 5576302 PATENT DATE: 961119 WPI ACCESSION NO.:  
97-011289 (9701)

PRIORITY APPLIC. NO.: US 468447 APPLIC. DATE: 950606

NATIONAL APPLIC. NO.: US 468447 APPLIC. DATE: 950606

LANGUAGE: English

ABSTRACT: Oligonucleotides (5 DNA sequences disclosed) in which at least 75%, preferably 100%, of the nucleotides are joined by either Sp or Rp phosphorothioate 3' to 5' links are claimed. The oligonucleotides inhibit in vivo transcription of hepatitis C virus RNA, so are useful as therapeutic agents, diagnostic agents and research tools. Chirally pure phosphorothioate oligonucleotides can be used as therapeutic agents in the same way as racemic (or non-sulfur substituted) compounds, e.g. to treat AIDS, inflammation, cytomegalovirus infection and various cancers. Oligonucleotides with chirally pure intersugar links form heteroduplexes with target RNA or DNA of greater thermodynamic stability (compared with racemic mixtures) and elicit RNA-ase-H (EC-3.1.26.4) activity. They also have better nuclease resistance. 2'-deoxyribonucleoside-5'-O-(1-thiophosphate) is prepared as a racemic mixture and the pure Sp or Rp diastereomers isolated by e.g. reverse-phase HPLC on ODS Hypersil. The chiral products are used to make the claimed oligonucleotides enzymatically in the presence of template, primer and nuclease. The oligonucleotides may also be synthesized. (18pp)

? ds

Set	Items	Description
S1	871	RIBONUCLEOSIDE AND (ANALOG OR ANALOGS)
S2	276	S1 AND (VIRUS OR VIRAL)
S3	141	S2 AND (INCORPORATE OR INCORPORATION)
S4	77	S2 AND (MUTATION OR MUTATIONS OR MUTATE OR MUTATES)
S5	264	RD S2 (unique items)

? t s5/6/64-164

Logging in to Dialog

Trying 9158046...Open

DIALOG INFORMATION SERVICES

PLEASE LOGON:

\*\*\*\*\*

ENTER PASSWORD:

t840lcpq

\*\*\*\*\*

Welcome to DIALOG

Dialog level 99.01.29D

Last logoff: 03feb99 13:19:33

Logon file001 03feb99 13:51:40

\*\*\*\*\* The DIALORDER suppliers DYNAMIC and FILEDOC are no longer \*\*\*\*\*  
\*\*\*\*\* in business. Please do not use them. \*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*File 265: Please use file 266 as file 265 is no longer \*\*\*\*\*  
\*\*\*\*\* available. \*\*\*\*\*

\*\*\*\*\* The MASIS DIALORDER service has been discontinued. For \*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\* details, please contact MARUZEN CO. LTD, at 3-3272-3496. \*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\* Files 100 and 552 have been removed from DIALOG. \*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\* NEW CURRENT year ranges installed dialog \*\*\*\*\*

File 1:ERIC 1966-1998/Dec

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\*File 1: In 1999, RIE and CIJE sections will be added separately,  
as soon as they arrive. UDs may be irregular. UD codes will change.

Set Items Description

--- ----

? b 410

>>>'IALOG' not recognized as set or accession number

? set hi ;set hi

03feb99 13:51:48 User233835 Session D236.1

\$0.29 0.089 DialUnits File1

\$0.29 Estimated cost File1

FTSNET 0.016 Hrs.

\$0.29 Estimated cost this search

\$0.29 Estimated total session cost 0.089 DialUnits

File 410:Chronolog(R) 1981-1999 Jan/Feb

(c) 1999 The Dialog Corporation plc

Set Items Description

--- ----

?

HILIGHT set on as ''

HILIGHT set on as ''

? b 155,5, 399, 357, 654

03feb99 13:52:24 User233835 Session D236.2

\$0.00 0.056 DialUnits File410

\$0.00 Estimated cost File410

FTSNET 0.010 Hrs.

\$0.00 Estimated cost this search

\$0.29 Estimated total session cost 0.145 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 155:MEDLINE(R) 1966-1999/Mar W4

(c) format only 1999 Dialog Corporation

File 5:BIOSIS PREVIEWS(R) 1969-1999/Jan W3

(c) 1999 BIOSIS

File 399:CA SEARCH(R) 1967-1999/UD=13005

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\*File 399: Use is subject to the terms of your user/customer agreement.

RANK charge added; see HELP RATES 399.

File 357:Derwent Biotechnology Abs 1982-1999/Feb B1

(c) 1999 Derwent Publ Ltd

\*File 357: Effective October 1, DialUnit rates adjusted for unrounding.

See HELP NEWS 357 for details.

File 351:DERWENT WPI 1963-1998/UD=9904;UP=9904;UM=9904

(c)1999 Derwent Info Ltd

\*File 351: From UD=9901, UM= and UP= update codes will "jump ahead."

See HELP NEWS 351 for info on Alert problems in updates 9851 and 9901.

File 654:US Pat.Full. 1990-1999/Jan 26

(c) format only 1999 The Dialog Corp.

\*File 654: Reassignment data now current through 08/20/98.

Reexamination, extension, expiration, reinstatement updated weekly.

Set Items Description

--- -----

? s free(w)base

Processing

1552826 FREE

1492315 BASE

S1 12256 FREE(W)BASE

? s s1 and (adenine or cytosine or guanine or uracil or thymine)

12256 S1

91089 ADENINE

44167 CYTOSINE

77170 GUANINE

47663 URACIL

21726 THYMINE

S2 768 S1 AND (ADENINE OR CYTOSINE OR GUANINE OR URACIL OR THYMINE)

? s s2 and (virus or viral)

768 S2

861523 VIRUS

428212 VIRAL

S3 379 S2 AND (VIRUS OR VIRAL)

? t s3/6/1-15

3/6/1 (Item 1 from file: 155)

08371058 95357477

DNA strand breakage is correlated with unaltered base release after gamma irradiation.

Aug 1995



3/6/2 (Item 2 from file: 155)  
'07773802 93349332

Metabolism and pharmacokinetics of the anti-HIV-1-specific inhibitor  
[1-[2',5'-bis-O-(tert-butyldimethylsilyl)-beta-D-ribofuranosyl]-3-N-methyl  
-thymine]-3'-spiro-5''-(4''-amino-1'',2''-oxathiole-2'',2''-dioxide)

Jul 6 1993

3/6/3 (Item 3 from file: 155)  
04504784 82142490

Effects of O2 on the reactions of activated bleomycin.  
Apr 10 1982

3/6/4 (Item 1 from file: 5)  
08933253 BIOSIS NO.: 199396084754

Metabolism and pharmacokinetics of the anti-HIV-1-specific inhibitor  
(1-(2',5'-BIS-O-(tert-butyldimethylsilyl)-beta-D  
ribofuranosyl)-3-N-methylthymine)  
3'-spiro-5''-(4''-amino-1'',2''-oxathiole-2'',2''-dioxide).  
1993

3/6/5 (Item 1 from file: 351)  
011869525

WPI Acc No: 98-286435/199825

Title Terms: RIBONUCLEOSIDE; ANALOGUE; INCREASE; MUTANT; RATE; **VIRUS**;  
REDUCE; VIABLE; **VIRUS**; INHIBIT; **VIRUS**; REPLICA

3/6/6 (Item 2 from file: 351)  
008014624

WPI Acc No: 89-279736/198939

Title Terms: PREPARATION; DI; DEOXY; DI; DEHYDRO; NUCLEOSIDE; HIGH; YIELD;  
USEFUL; ANTIVIRAL; ANTI; METABOLISM; ANTI; NEOPLASMS; AGENT; EFFECT; HIV  
Index Terms/Additional Words: HUMAN; IMMUNO; DEFICIENT; **VIRUS**

3/6/7 (Item 3 from file: 351)  
001850376

WPI Acc No: 77-71399Y/197740

Title Terms: ARABINO; FURANO; OXAZOLIDINE; PRODUCE; REACT; CYCLOCYTIDINE;  
HYDROGEN; SULPHIDE; SOLVENT; PRESENCE; AMINE

3/6/8 (Item 1 from file: 654)  
02904347

HUMAN LIM PROTEINS

FULL TEXT: 2317 lines

3/6/9 (Item 2 from file: 654)  
02904231

HUMAN PROTEIN KINASES

FULL TEXT: 2164 lines

3/6/10 (Item 3 from file: 654)  
02904230

UBC7-LIKE UBIQUITIN-CONJUGATING ENZYME

FULL TEXT: 2080 lines

3/6/11 (Item 4 from file: 654)

02904219  
HUMAN SIGMA RECEPTOR  
FULL TEXT: 2038 lines

3/6/12 (Item 5 from file: 654)  
02904217  
DNA ENCODING A HUMAN MEMBRANE PROTEIN  
FULL TEXT: 1753 lines

3/6/13 (Item 6 from file: 654)  
02904190  
HUMAN TRANSMEMBRANE 4 SUPERFAMILY PROTEIN  
FULL TEXT: 2220 lines

3/6/14 (Item 7 from file: 654)  
02901616  
HUMAN SQUALENE EPOXIDASE  
FULL TEXT: 2022 lines

3/6/15 (Item 8 from file: 654)  
02901615  
HUMAN ZINC BINDING PROTEINS  
FULL TEXT: 2188 lines  
? ds

Set	Items	Description
S1	12256	FREE (W) BASE
S2	768	S1 AND (ADENINE OR CYTOSINE OR GUANINE OR URACIL OR THYMIN- E)
S3	379	S2 AND (VIRUS OR VIRAL)

? t s3/7/1-7

3/7/1 (Item 1 from file: 155)  
DIALOG(R) File 155: MEDLINE(R)  
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08371058 95357477

DNA strand breakage is correlated with unaltered base release after gamma irradiation.

Henle ES; Roots R; Holley WR; Chatterjee A  
Division of Biochemistry and Molecular Biology, University of California, Berkeley 94720, USA.

Radiat Res (UNITED STATES) Aug 1995, 143 (2) p144-50, ISSN 0033-7587  
Journal Code: QMP

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Unaltered base release is correlated with strand breakage for gamma-irradiated bacteriophage PM2 DNA in aqueous solution at pH 7.4. The yield of DNA strand breaks is determined by the agarose gel electrophoresis method. High-performance liquid chromatography (HPLC) is used to assay the release of unaltered nucleic bases. Previously reported HPLC methods have been updated. Unaltered base release is linear with dose up to 424 Gy, where up to 0.2% of all DNA bases are released. No detectable amounts of unaltered nucleosides are released and, besides unaltered bases, only one other product released from DNA is observed. Base release yields do not reflect the PM2 GC content of 43%. Only 76% of all prompt strand breaks appear to be associated with the release of an unaltered **free base**, whereby the **guanine**, **cytosine**, **adenine** and **thymine** yields are 9, 27, 18 and 22% of the prompt strand break

yield, respectively. Postirradiation incubation at 37 degrees C for 24 h increases the strand break yield 1.38-fold and the unaltered base release yield 1.76-fold such that 97% of the final strand breaks appear to be associated with the release of an unaltered base, whereby the **guanine**, **cytosine**, **adenine** and **thymine** yields are 10, 36, 23 and 28% of the final strand break yield, respectively. These data indicate that, given proper conditions, nearly every strand break leads to a base release. The bearing of these results on OH radical attack leading to strand breakage and base release is discussed.

3/7/2 (Item 2 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

07773802 93349332

Metabolism and pharmacokinetics of the anti-HIV-1-specific inhibitor [1-[2',5'-bis-O-(tert-butyldimethylsilyl)-beta-D-ribofuranosyl]-3-N-methyl-**thymine**]-3'-spiro-5'-(4'-amino-1',2'-oxathiole-2',2'-dioxide)

Balzarini J; Naesens L; Bohman C; Perez-Perez MJ; San-Felix A; Camarasa MJ; De Clercq E  
Rega Institute for Medical Research, Katholieke Universiteit Leuven, Belgium.

Biochem Pharmacol (ENGLAND) Jul 6 1993, 46 (1) p69-77, ISSN 0006-2952  
Journal Code: 9Z4

Languages: ENGLISH

Document type: JOURNAL ARTICLE

1-[2',5'-Bis-O-(tert-butyldimethylsilyl)-beta-D-ribofuranosyl]-3-N-methyl-**thymine**]-3'-spiro-5'-(4'-amino-1',2'-oxathiole-2',2'-dioxide) (TSAO-m3T) is a potent, selective and specific inhibitor of human immunodeficiency virus type 1 replication in vitro. Uptake of TSAO-m3T by human CEM cells is drug concentration-dependent and increased proportionally with increasing initial extracellular TSAO-m3T concentrations up to 20 micrograms/mL. Within 6 hr of incubation, the cells were almost completely saturated with the test compound; further incubation up to 72 hr did not markedly increase the intracellular concentration of the compound. No intracellular metabolic conversion of TSAO-m3T was observed in CEM, MT-4 or MOLT-4 cells. Upon intravenous bolus administration of TSAO-m3T to mice at 0.75 mg/kg, TSAO-m3T was rapidly cleared from the plasma in a mono-exponential manner (half-life: 22 min; distribution volume: 9.5 L/kg; total body clearance: 17.8 L/hr/kg). TSAO-m3T mainly accumulated in the lungs, followed by the heart, kidney and liver. Significant amounts of different metabolites of TSAO-m3T were detected in most tissues, the liver, kidney and spleen being the organs that showed the most extensive metabolism. The principal metabolites identified were TSAO-m3T derivatives in which the t-butyldimethylsilyl moiety at C-2' and/or C-5' had been split off. The **free base** N3-methylthymine was not detected.

3/7/3 (Item 3 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

04504784 82142490

Effects of O2 on the reactions of activated bleomycin.

Burger RM; Peisach J; Horwitz SB

J Biol Chem (UNITED STATES) Apr 10 1982, 257 (7) p3372-5, ISSN 0021-9258 Journal Code: HIV

Contract/Grant No.: HL-13399, HL, NHLBI; CA-15714, CA, NCI

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The antitumor drug, bleomycin, interacts with either Fe(II) and O2 or Fe(III) and H2O2 to form an activated complex which attacks DNA. Under

aerobic conditions, both reactions yield similar quantities of free bases and products consisting of base plus deoxyribose carbon atoms 1 to 3. Under anaerobic conditions, activated bleomycin releases only **free base**. The yield of **free base** is the same under aerobic or anaerobic conditions, provided DNA is furnished in excess. When the DNA concentration is limiting, more base is released under anaerobic than under aerobic conditions. Drug self-destruction proceeds as quickly and completely in the presence or absence of O<sub>2</sub>.

3/7/4 (Item 1 from file: 5)  
DIALOG(R)File 5:BIOSIS PREVIEWS(R)  
(c) 1999 BIOSIS. All rts. reserv.

08933253 BIOSIS NO.: 199396084754  
Metabolism and pharmacokinetics of the anti-HIV-1-specific inhibitor  
1-(2',5'-BIS-O-(tert-butyldimethylsilyl)-beta-D-ribofuranosyl)-3-N-methylthymine)  
3'-spiro-5''-(4''-amino-1'',2''-oxathiole-2'',2''-dioxide).

AUTHOR: Balzarini Jan(a); Naesens Lieve; Bohman Christina; Perez-Perez Maria-Jesus; San-Felix Ana; Camarasa Maria-Jose; De Clercq Erik  
AUTHOR ADDRESS: (a)Rega Inst. Med. Res., Katholieke Univ. Leuven, B-3000 Leuven, Belgium

JOURNAL: Biochemical Pharmacology 46 (1):p69-77 1993  
ISSN: 0006-2952  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT:

1-(2',5'-Bis-O-(tert-butyldimethylsilyl)-beta-D-ribofuranosyl)-3-N-methyl-thymine)-3'-spiro-5''-(4''-amino-1'',2''-oxathiole-2'',2''-dioxide) (TSAO-m-3T) is a potent, selective and specific inhibitor of human immunodeficiency **virus** type 1 replication in vitro. Uptake of TSAO-m-3T by human CEM cells is drug concentration-dependent and increased proportionally with increasing initial extracellular TSAO-m-3T concentrations up to 20 µg/mL. Within 6 hr of incubation, the cells were almost completely saturated with the test compound; further incubation up to 72 hr did not markedly increase the intracellular concentration of the compound. No intracellular metabolic conversion of TSAO-m-3T was observed in CEM, MT-4 or MOLT-4 cells. Upon intravenous bolus administration of TSAO-m-3T to mice at 0.75 mg/kg, TSAO-m-3T was rapidly cleared from the plasma in a mono-exponential manner (half-life: 22 min; distribution volume: 9.5 L/kg; total body clearance: 17.8 L/hr/kg). TSAO-m-3T mainly accumulated in the lungs, followed by the heart, kidney and liver. Significant amounts of different metabolites of TSAO-m-3T were detected in most tissues, the liver, kidney and spleen being the organs that showed the most extensive metabolism. The principal metabolites identified were TSAO-m-3T derivatives in which the t-butyldimethylsilyl moiety at C-2' and/or C-5' had been split off. The **free base** N-3-methylthymine was not detected.

3/7/5 (Item 1 from file: 351)  
DIALOG(R)File 351:DERWENT WPI  
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011869525  
WPI Acc No: 98-286435/199825  
Use of ribonucleoside analogues - for increasing mutation rate of **virus** to reduce viability of **virus** and inhibit **viral** replication  
Patent Assignee: UNIV WASHINGTON (UNIW )

Inventor: LOEB L A; MURKINS J I

Number of Countries: 1 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
WO 9818324	A1	19980507	WO 97US19670	A	19971027	A01N-043/04	199825 B
AU 9850959	A	19980522	AU 9850959	A	19971027	A01N-043/04	199840

Priority Applications (No Type Date): US 9740535 A 19970227; US 9629404 A 19961028

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
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WO 9818324	A1	E	59			
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Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9850959	A		Based on		WO 9818324	
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Abstract (Basic): WO 9818324 A

Method (A) for increasing the mutation rate of a **virus** comprises administering an RNA nucleoside analogue to a virally infected cell.

The analogue is incorporated by a polymerase into an RNA copy of a genomic nucleic acid encoding the **virus**. The analogue replaces a first natural occurring nucleotide having a first complementary nucleotide where the analogue complements a second nucleotide which is other than the first nucleotide, thereby inducing the **virus** to mutate.

Also claimed are:

(1) a retroviral particle (RP) comprising an RNA nucleoside analogue;

(2) a population of cells comprising a highly variable population of replicated homologous **viral** nucleic acids;

(3) a cell comprising a **viral** genomic nucleic acid, an RNA analogue, a cellular mRNA analogue and a **viral** genomic RNA analogue;

(4) a method (B) for detecting the mutagenic potential of a ribonucleoside analogue (RA) comprising integrating the RA into a **viral** RNA synthesised by a polymerase, and determining whether the incorporation causes a mutation in a progeny **virus**;

(5) a method (C) for screening for a RA which is incorporated by a cellular polymerase, comprising incubating the cellular polymerase with the RA in the presence of a nucleic acid template, and detecting whether the RA is polymerised;

(6) a pharmaceutical composition comprising a dose of an RNA nucleoside analogue as described in (A);

(7) a method (D) for increasing the mutation rate of a **virus** in an animal comprising administering a mutagenic RA;

(8) a library of nucleoside analogues, where each comprises a random chemical substituent linked to a group consisting of uridine, cytidine, guanosine, adenosine, N4-amino-cytidine, N1-methyl-N4-amino-cytidine, 3,N4-etheno-cytidine, 3-methylcytidine, 5-hydroxycytidine, N4-dimethyl-cytidine, 5-(2-hydroxyethyl) cytidine, 5-chloro-cytidine, 5-bromocytidine, N4-methyl-N4-amino-cytidine, 5-amino-cytidine, 5-nitroso-cytidine, 5-(hydroxyalkyl) cytidine, 5-(thioalkyl)-cytidine and cytidine glycol, 5-hydroxyuridine, 3-hydroxyethyl-uridine, 3-methyluridine, O2-methyluridine, O2-ethyluridine, 5-amino-uridine, O4-methyluridine, O4-ethyluridine, O4-isobutyl-uridine, O4-alkyl-uridine, 5-nitroso-uridine, 5-hydroxyalkyl-uridine, and 5-(thioalkyl)-uridine, 1,N6-etheno-adenosine, 3-methyladenosine, and N6-methyladenosine, 8-hydroxy-guanosine, O6 methylguanosine, O6-ethyl-guanosine, O6-isopropyl-guanosine, 3,N2-etheno-guanosine, O6 alkyl-guanosine,

8-oxo-guanosine, 2,3-etheno-guanosine, and 8-aminoguanosine) a method (E) for identifying a mutagenic RA comprising:

- (a) providing RAs;
  - (b) incorporating a portion of the RAs into a ribonucleoside polymer using a RNA polymerase;
  - (c) isolating the ribonucleoside polymer, and
  - (d) determining the chemical composition of a RA which is incorporated into the ribonucleoside polymer;
- (10) a method (F) for making a mutagenic RA comprising:
- (a) chemically modifying a nucleotide analogue selected from analogues as in (8) to yield a chemically modified RA;
  - (b) determining whether the chemically modified analogue is incorporated by an RNA polymerase into a polyribonucleotide molecule, and
  - (c) measuring the mutagenic potential of the chemically modified analogue;

(11) a kit comprising a container and one or more of the following components: a control mutagenic RNA analogue, a test mutagenic RNA analogue, an RNA polymerase, reagents for detecting incorporation of the RNA analogue by the RNA polymerase, and instructions in the use of the kit components for detecting the mutagenic potential of the test mutagenic analogue as compared to the control mutagenic RNA analogue;

(12) a method (F) for increasing the mutation rate of a **virus** in an animal comprising administering a RA to a virally infected cell, where the analogue is incorporated by a polymerase into an RNA copy of a genomic nucleic acid encoding the **virus**, the analogue replacing a first natural occurring nucleotide having a first complementary nucleotide where the analogue complements a second nucleotide which is other than the first nucleotide, in combination with a drug that reduces the concentration of the first natural occurring nucleotide, and

(13) a method (G) for increasing the mutation rate of a **virus** comprising administering a **free base** selected from **adenine, cytosine, guanine, uracil and thymine** to a virally infected cell, where the base is incorporated by a polymerase into an RNA or DNA copy of a genomic nucleic acid encoding the **virus**, the base replacing a first natural occurring nucleotide having a first complementary nucleotide where the base complements a second nucleotide which is other than the first nucleotide, thereby inducing the **virus** to mutate.

USE - The methods can be used to increase the mutation rate of viruses to reduce the viability of progeny generations of the **virus**, thereby inhibiting **viral** replication. They can be used to inhibit **viral** replication by **virus** such as hepatitis A, B, C, D, E and G, flaviviruses such as dengue fever and yellow fever, filoviruses such as ebola **virus**, influenza viruses, parainfluenza viruses, including respiratory syncytial **virus**, measles, mumps, the picornaviruses, including the rhinoviruses, the togaviruses, including encephalitis, corona viruses, rubella, bunyaviruses, including hantaviruses, reoviruses, including rotaviruses, rhabdoviruses, arenaviruses such as lymphocytic chorio-meningitis, the human T-cell leukaemia (HTLV) viruses such as HTLV-1 and HTLV-2, adult T cell leukaemia (ATL), HIV-1 and HIV-2, simian immunodeficiency **virus** (SIV), feline leukaemia **virus**, feline immunodeficiency **virus** or vesicular stomatitis **virus**.

Dwg. 0/3

Derwent Class: B04; D16

International Patent Class (Main): A01N-043/04

International Patent Class (Additional): A61K-031/70; C12N-007/04;

C12N-007/06; C12Q-001/68; C12Q-001/70

3/7/6 (Item 2 from file: 351)  
DIALOG(R) File 351:DERWENT WPI

008014624

WPI Acc No: 89-279736/198939

Prepn. of 2',3''-dideoxy didehydronucleoside(s) in high yields - useful as antiviral, anti-metabolic and anti-neoplastic agents, esp. effective against HIV

Patent Assignee: BRISTOL-MYERS SQUIBB CO (BRIM ); BRISTOL-MYERS CO (BRIM )

Inventor: FULLER C E; HOWELL H G; MANSURI M M; MARTIN J C; STARRETT J E

Number of Countries: 023 Number of Patents: 031

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
EP 334368	A	19890927	EP 89105269	A	19890323		198939 B
AU 8931673	A	19890928					198947
NO 8901208	A	19891016					198947
DK 8901464	A	19890925					198948
PT 90099	A	19891110					198950
FI 8901338	A	19890925					199002
US 4904770	A	19900227	US 88173473	A	19880324		199015
JP 2149595	A	19900608	JP 8971592	A	19890323		199029
NO 9103456	A	19890925					199202
NO 9103457	A	19890925					199202
NO 9103458	A	19890925					199202
NO 9103459	A	19890925					199202
ZA 8902166	A	19920226	ZA 892166	A	19890322		199213
US 5130421	A	19920714	US 88173473	A	19880324	C07H-017/00	199231
			US 89441023	A	19891124		
			US 91697512	A	19910429		
EP 334368	A3	19911227	EP 89105269	A	19890323		199250
NO 171367	B	19921123	NO 891208	A	19890320	C07H-019/06	199301
NO 172345	B	19930329	NO 891208	A	19890320	C07H-019/06	199318
			NO 913456	A	19910903		
US 5212294	A	19930518	US 88173473	A	19880324	C07H-017/00	199321
			US 89441023	A	19891124		
			US 91697512	A	19910429		
			US 92860938	A	19920331		
FI 9400103	A	19940110	FI 891338	A	19890321	C07H-000/00	199412
			FI 94103	A	19940110		
IL 105572	A	19940412	IL 105572	A	19890321	C07D-405/04	199422
IL 105573	A	19940412	IL 105573	A	19890321	C07D-473/00	199422
IL 105571	A	19940530	IL 105571	A	19890321	C07D-405/04	199424
IL 105570	A	19940826	IL 105570	A	19890321	C07D-405/04	199435
IL 89693	A	19940826	IL 89693	A	19890321	C07D-405/04	199435
FI 93111	B	19941115	FI 891338	A	19890321	C07D-405/04	199445
FI 9405698	A	19941202	FI 94103	A	19940110	C07H-000/00	199510
			FI 945698	A	19941202		
FI 9405699	A	19941202	FI 94103	A	19940110	C07H-000/00	199510
			FI 945699	A	19941202		
FI 9405700	A	19941202	FI 94103	A	19940110	C07H-000/00	199510
			FI 945700	A	19941202		
CA 1339448	C	19970909	CA 593738	A	19890315	C07H-019/04	199749
CA 1339483	C	19970930	CA 593738	A	19890315	C07H-019/04	199801
			CA 617047	A	19960321		
CA 1339861	C	19980512	CA 593738	A	19890315	C07H-019/04	199830
			CA 616776	A	19931206		

Priority Applications (No Type Date): US 88173473 A 19880324; US 89441023 A 19891124; US 91697512 A 19910429; US 92860938 A 19920331

Cited Patents: No-SR.Pub; 9.Jnl.Ref; DE 1695445

Patent Details:

Patent	Kind	Lan	Pg	Filing	Notes	Application	Patent
EP 334368	A	E	22				

Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

US 4904770 A 11

ZA 8902166	A	47		
US 5130421	A	11	ex	US 88173473
			Cont of	US 89441023
			Div ex	US 4904770
NO 171367	B		Previous Publ.	NO 8901208
NO 172345	B		Div ex	NO 891208
			Previous Publ.	NO 9103456
US 5212294	A	11	Div ex	US 88173473
			Cont of	US 89441023
			Div ex	US 91697512
			Div ex	US 4904770
			Div ex	US 5130421
FI 9400103	A		Div ex	FI 891338
IL 105572	A		Div ex	IL 89693
IL 105573	A		Div ex	IL 89693
IL 105571	A		Div ex	IL 89693
IL 105570	A		Div ex	IL 89693
FI 93111	B		Previous Publ.	FI 8901338
FI 9405698	A		Div ex	FI 94103
FI 9405699	A		Div ex	FI 94103
FI 9405700	A		Div ex	FI 94103
CA 1339483	C		Div ex	CA 593738
CA 1339861	C		Div ex	CA 593738

Abstract (Basic): EP 334368 A

In a process for producing a 2', 3'-dideoxy-2', 3'-didehydronucleoside of formula (I) comprising: (a) converting a 2'-deoxynucleoside of formula (II) to a reactive 3', 5'-anhydro-2'-deoxynucleoside intermediate of formula (III), and (b) converting (III) to (I) in the presence of a strong base, the improvement comprises (i) reacting (III) with KOC(CH<sub>3</sub>)<sub>3</sub>, n-BuLi, or LDA in the presence of a polar solvent selected from DMSO, THF, DMF and/or DME, (ii) triturating the resulting salt in the presence of an organic solvent, (iii) collecting the solid crude salt, dissolving in water and neutralising to obtain the solid nucleoside **free base** prod. The base moiety= opt. substd. base consisting pyrimidine, aza-pyrimidine and deaza-pyrimidine, X and Z=N or CH; Y=CR<sub>5</sub> or N; R<sub>4</sub> = OH or NH<sub>2</sub>; R<sub>5</sub> = H; opt. halo-subst. alkyl of formula C<sub>n</sub>H<sub>2n</sub>A; opt. halo-subst. alkenyl of formula (CH<sub>2</sub>)<sub>m</sub>CH=CHA; m=0-3; n=1-3; A=H, F, Cl, Br or I.

Also claimed is the prepn. of (I) comprising (a) converting (II) to an intermediate of formula (IV);. Also claimed is the prepn. of (I) from starting material (VI), where B is the nucleotide base.

Dwg.0/0

Abstract (Equivalent): US 5130421 A

Prodn. of 2',3'-dideoxy-2',3' -didehydronucleosides of formula (I) comprises preparing a 3',5'-anhydro-2'-deoxynucleoside intermediate of formula (II) and reacting this with a strong base. The process is improved by: (a) reacting (II) with a strong base chain from KOTBu, nBuLi, NaH and LDA in the presence of DMSO, THF, DMF or DME; (b) triturating the salt produced in the presence of an organic salt; (c) collecting the solid crude salt intermediate produced and dissolving it in water; and (d) neutralising it to give (I).

In (I) the base moiety is pyrimidine or aza- or diazapyrimidine, all opt. substd. X = N or CH. Y = CR<sub>5</sub> or N. Z = CH or N. R<sub>4</sub> = OH or NH<sub>2</sub>. R<sub>5</sub> = H, C<sub>n</sub>H<sub>2n</sub>A or (CH<sub>2</sub>)<sub>m</sub>CH=CHA. m = 0-3. n = 1-3. A = H, F, C, Br or I.

USE - (I) have antiviral, antimetabolic and antineoplastic activity. They are also active in HIV. (Dwg.0/0)

US 4904770 A

2',3'-Dideoxy-2',3' -didehydronucleoside of formula (I) is produced, by (a) reacting a ribonucleoside of formula (II) with acyloxyisobutyryl bromide in a polar solvent under anhydrous conditions at 75-100 deg.C for 1-3 hrs. to form intermediates of formula (III); (b) eliminating using an aprotic polar solvent contg. Zn/Cu reagent; and (c) deprotecting 5'-O-protecting gp. using a mild base to form



prod. B is uracil 5-methyluracil; R is  
acyloxyisobutyryl, and R' is the acyl gp. of acyloxyisobutyryl bromide.

USE - As antiviral agents, esp. against human immunodeficiency  
viruses (HIV). (11pp)

Derwent Class: B03

International Patent Class (Main): C07D-405/04; C07D-473/00; C07H-000/00;  
C07H-017/00; C07H-019/06

International Patent Class (Additional): A61K-031/50; C07D-473/02;  
C07D-473/34; C07H-019/00; C07H-019/04; C07H-019/07

3/7/7 (Item 3 from file: 351)  
DIALOG(R) File 351:DERWENT WPI  
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001850376

WPI Acc No: 77-71399Y/197740

Arabino-furano-thion-oxazolidine prodn. - by reacting cyclocytidine with  
hydrogen sulphide in solvent in presence of amine

Patent Assignee: UEDA T (UEDA-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
JP 52100489	A	19770823					197740 B

Priority Applications (No Type Date): JP 7617117 A 19760220

Abstract (Basic): JP 52100489 A

Prodn. of 2-thio-beta-D-arabinofuranol 1',2]:4,5 -2-oxazolidine (I)  
comprises reacting O2,2'-cyclocytidine (II) with H2S in solvent in the  
presence of an amine. (II) may be used as the **free base** or  
as acid addn. salts of HCl, HBr, HI, H2SO4, HClO4, MsOH, p-TsOH or  
PhSO3H.

Reaction is e.g. in DMFA, DMAC, HMPA, DMSO, dioxane, ethylene  
glycol, diethylene glycol or a mixt. Tertiary amine e.g. Et3N, Me3N,  
Bu3N, pyridine, picoline, lutidine is used at 0-100 degrees C pref.  
50-80 degrees C for 2 hrs. to 5 days. H2S may be added as gas or  
liquid.

(I) is an intermediate for pharmacologically active  
antimetabolites, such as arabino-type or anhydro-type nucleosides. (I)  
may be converted via 5 steps into an anti-viral agent arabino-  
**furanosyladenine** in 39% yield.

Derwent Class: B02

International Patent Class (Additional): C07H-009/06

? ds

Set	Items	Description
S1	12256	FREE (W) BASE
S2	768	S1 AND (ADENINE OR CYTOSINE OR GUANINE OR URACIL OR THYMIN- E)
S3	379	S2 AND (VIRUS OR VIRAL)
? s s3 and (mutation or mutate)		
	379	S3
	348473	MUTATION
	1207	MUTATE
S4	169	S3 AND (MUTATION OR MUTATE)
? t s4/6/1-7		

4/6/1 (Item 1 from file: 351)  
011869525  
WPI Acc No: 98-286435/199825

Title Terms: RIBONUCLEOSIDE; ANALOGUE; INCREASE; MUTANT RATE; VIRUS;  
REDUCE; VIABLE; VIRUS; INHIBIT; VIRUS; REPLICA

4/6/2 (Item 1 from file: 654)  
02904347  
HUMAN LIM PROTEINS  
FULL TEXT: 2317 lines

4/6/3 (Item 2 from file: 654)  
02904231  
HUMAN PROTEIN KINASES  
FULL TEXT: 2164 lines

4/6/4 (Item 3 from file: 654)  
02904230  
UBC7-LIKE UBIQUITIN-CONJUGATING ENZYME  
FULL TEXT: 2080 lines

4/6/5 (Item 4 from file: 654)  
02904219  
HUMAN SIGMA RECEPTOR  
FULL TEXT: 2038 lines

4/6/6 (Item 5 from file: 654)  
02904217  
DNA ENCODING A HUMAN MEMBRANE PROTEIN  
FULL TEXT: 1753 lines

4/6/7 (Item 6 from file: 654)  
02904190  
HUMAN TRANSMEMBRANE 4 SUPERFAMILY PROTEIN  
FULL TEXT: 2220 lines  
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03feb99 13:58:24 User233835 Session D236.3  
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\$7.10 2 Type(s) in Format 7  
\$9.96 7 Types  
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\$3.15 Estimated cost File654

OneSearch 6 files, 1.588 DialUnits File001  
FTSNET 16 Hrs.  
\$24.80 Estimated cost this search  
\$25.09 Estimated total session cost 1.733 DialUnits  
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Logging in to Dialog

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DIALOG INFORMATION SERVICES

PLEASE LOGON:

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STN Express timed out waiting for host response.

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Logging in to Dialog

Trying 9158046...Open

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Logging in to Dialog

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Last logoff: 09feb99 15:17:33

Logon file001 10feb99 11:03:15

ANNOUNCEMENT \*\*\*\* ANNOUNCEMENT \*\*\*\* ANNOUNCEMENT

NEW

\*\*\*Financial Times Abstracts - January 4, 1999

\*\*\*MediConf (File 431) - December 1, 1998

\*\*\*

RELOADED

\*\*\*EMBASE (Files 72,73)

\*\*\*CLAIMS/U.S. Patents (340, 341, 942)

\*\*\*BIOSIS Previews (File 5,55)- enhanced 11/16/98, see HE dialog

LP NEWS5

\*\*\*Claims Reassignment/Reexamination (File 123)

\*\*\*

REMOVED

\*\*\*Disclosure Database, File 100, removed 1/31/99

\*\*\*Technimetrics Executive Directory, File 552,  
removed effective 1/31/99

\*\*\*Hoppenstedt Dir of German Companies removed  
effective 12/31/98

\*\*\*

## DIALINDEX

\*\*\*\*DIALINDEX categories have been revised. For listing new/revise  
categories see <http://library.dialog.com/bluesheets/html/blo.html>.  
For more details, see HELP NEWS411.

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>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
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***** *****
***** NEW CURRENT year ranges installed. *****
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File 1:ERIC 1966-1999/Feb

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\*File 1: In 1999, RIE and CIJE sections will be added separately,  
as soon as they arrive. UDs may be irregular. UD codes will change.

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File 410:Chronolog(R) 1981-1999 Jan/Feb

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File 155:MEDLINE(R) 1966-1999/Mar W4

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File 5:BIOSIS PREVIEWS(R) 1969-1999/Jan W3

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File 399:CA SEARCH(R) 1967-1999/UD=13006

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RANK charge added; see HELP RATES 399.

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\*File 357: Effective October 1, DialUnit rates adjusted for unrounding.  
See HELP NEWS 357 for details.

File 351:DERWENT WPI 1963-1998/UD=9906;UP=9906;UM=9906

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\*File 351: From UD=9901, UM= and UP= update codes will "jump ahead."  
See HELP NEWS 351 for info on Alert problems in updates 9851 and 9901.

File 654:US Pat.Full. 1990-1999/Feb 02

(c) format only 1999 The Dialog Corp.

\*File 654: Reassignment data now current through 08/20/98.  
Reexamination, extension, expiration, reinstatement updated weekly.

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? s	(RNA(w)analog) or (RNA(w)nucleoside(w)analog)	
	685006	RNA
	264852	ANALOG
	111	RNA(W)ANALOG
	685006	RNA
	62670	NUCLEOSIDE
	264852	ANALOG
	4	RNA(W)NUCLEOSIDE(W)ANALOG
S1	115	(RNA(W)ANALOG) OR (RNA(W)NUCLEOSIDE(W)ANALOG)
? rd		
>>>Duplicate detection is not supported for File 351.		
>>>Duplicate detection is not supported for File 654.		
>>>Records from unsupported files will be retained in the RD set.		
	...examined 50 records	(50)
	...examined 50 records	(100)
	...completed examining records	
	S2	101 RD (unique items)
? s s2 and (virus or viral)		
<-----User Break----->		
u!		
? s s2 and (virus or viral or HIV)		
	101	S2
	861992	VIRUS
	428494	VIRAL
	187045	HIV
S4	38	S2 AND (VIRUS OR VIRAL OR HIV)
? s s2 not s4		
	101	S2
	38	S4
S5	63	S2 NOT S4
? ds		
Set	Items	Description
S1	115	(RNA(W)ANALOG) OR (RNA(W)NUCLEOSIDE(W)ANALOG)
S2	101	RD (unique items)
S3	37	S2 AND (VIRUS OR VIRAL)
S4	38	S2 AND (VIRUS OR VIRAL OR HIV)
S5	63	S2 NOT S4
? t s4/6/1-38		

4/6/1 (Item 1 from file: 155)  
08749467 96357031

RNA replication by a respiratory syncytial virus RNA analog does not obey the rule of six and retains a nonviral trinucleotide extension at the leader end.  
Aug 1996

4/6/2 (Item 2 from file: 155)  
08414101 95287469

Vesicular stomatitis virus infection induces a nuclear DNA-binding factor specific for the interferon-stimulated response element.  
Jul 1995

4/6/3 (Item 3 from file: 155)  
08255675 95156568

Mokola virus glycoprotein and chimeric proteins can replace rabies virus glycoprotein in the rescue of infectious defective rabies virus particles.  
Mar 1995

4/6/4 (Item 4 from file: 155)  
06820102 92037602

Conformational studies on a peptide fragment representing the RNA-binding N-terminus of a viral coat protein using circular dichroism and NMR spectroscopy.  
Oct 15 1991

4/6/5 (Item 5 from file: 155)  
04405479 83285336

Evidence that a nucleotide sequence, "boxA," is involved in the action of the NusA protein.  
Aug 1983

4/6/6 (Item 1 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA

4/6/7 (Item 2 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Rescue of synthetic helper-dependent analogs of the genomic RNAs of respiratory syncytial virus and parainfluenza virus type 3

4/6/8 (Item 3 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Rescue of a 7502-nucleotide (49.3% of full-length) synthetic analog of respiratory syncytial virus genomic RNA

4/6/9 (Item 4 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Duplex-forming polynucleotide conjugates

4/6/10 (Item 5 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Hybridization assay using midivariant RNA analogs and Q.beta. replicase

4/6/11 (Item 6 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Rous sarcoma virus. Effects of nucleoside analogs on virus synthesis

4/6/12 (Item 7 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Thermal activation of the antiviral activity of synthetic double-stranded polyribonucleotides

4/6/13 (Item 1 from file: 357)  
0121595 DBA Accession No.: 91-09237  
Modified oligonucleotide analogs containing novel linkages - which modulate gene expression in therapy and diagnosis of **virus** and bacterium disease and tumor cell growth 1991

4/6/14 (Item 1 from file: 654)  
02901621  
CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS  
FULL TEXT: 1114 lines

4/6/15 (Item 2 from file: 654)  
02895559  
COMPOSITIONS AND METHODS OF DEVELOPING OLIGONUCLEOTIDES AND OLIGONUCLEOTIDE ANALOGS HAVING ANTIVIRAL ACTIVITY  
FULL TEXT: 1131 lines

4/6/16 (Item 3 from file: 654)  
02881864  
COMPOSITIONS AND METHODS FOR TREATING AND PREVENTING PATHOLOGIES INCLUDING CANCER  
FULL TEXT: 7541 lines

4/6/17 (Item 4 from file: 654)  
02881621  
PREVENTION OF **VIRAL** INFECTION BY THE INDUCTION OF APOPTOSIS AND/OR THE USE OF AN ANTIVIRAL GENE, HEM1  
FULL TEXT: 1410 lines

4/6/18 (Item 5 from file: 654)  
02835669  
METAL COMPLEXES OF TEXAPHYRINS  
FULL TEXT: 1909 lines

4/6/19 (Item 6 from file: 654)  
02822727  
STRANDED RNA **VIRUS** PARTICLES  
FULL TEXT: 2015 lines

4/6/20 (Item 7 from file: 654)  
02782328  
METHODS OF PRODUCING SECRETED RECEPTOR ANALOGS AND BIOLOGICALLY ACTIVE  
DIMERIZED POLYPEPTIDE FUSIONS  
FULL TEXT: 4198 lines

4/6/21 (Item 8 from file: 654)  
02767376  
REAGENTS AND METHODS FOR MODULATING GENE EXPRESSION THROUGH RNA MIMICRY  
FULL TEXT: 1542 lines

4/6/22 (Item 9 from file: 654)  
02745541  
PREVENTION AND TREATMENT OF RESPIRATORY TRACT DISEASE  
FULL TEXT: 994 lines

4/6/23 (Item 10 from file: 654)  
02742745  
RNA PHOTOCLEAVAGE USING TEXAPHYRINS  
FULL TEXT: 1805 lines

4/6/24 (Item 11 from file: 654)  
02740195  
OLIGORIBONUCLEOTIDE ASSAYS FOR NOVEL ANTIBIOTICS  
FULL TEXT: 1215 lines

4/6/25 (Item 12 from file: 654)  
02730042  
SOLID PHASE SYNTHESIS OF OLIGONUCLEOTIDES WITH STEREOSPECIFIC SUBSTITUTED  
PHOSPHONATE LINKAGES BY PENTAVALENT GRIGNARD COUPLING  
FULL TEXT: 1540 lines

4/6/26 (Item 13 from file: 654)  
02727172  
STRATEGY FOR THE PRODUCTION OF RNA FROM IMMOBILIZED TEMPLATES  
[Contacting with transcription mixture comprising a buffer, nucleoside  
triphosphates and an RNA polymerase; produces RNA having a sequence  
complementary to coding strand]  
FULL TEXT: 860 lines

4/6/27 (Item 14 from file: 654)  
02668496  
NUCLEIC ACID PROBES FOR THE DETECTION OF SHIGELLA  
[Gastrointestinal disorders]  
FULL TEXT: 4987 lines

4/6/28 (Item 15 from file: 654)  
02651428  
FLUORESCENCE DETECTION USING TEXAPHYRINS  
FULL TEXT: 2532 lines

4/6/29 (Item 16 from file: 654)  
02640819  
RADIATION SENSITIZATION USING TEXAPHYRINS  
[Treatment of neoplasm or atheroma]  
FULL TEXT: 2645 lines



4/6/30 (Item 17 from file: 654)  
02625227  
DNA PHOTOCLEAVAGE USING TEXAPHYRINS  
[Covalently coupled to a site-directing molecule preferably oligonucleotide;  
exposure to light]  
FULL TEXT: 2604 lines

4/6/31 (Item 18 from file: 654)  
02610665  
TEXAPHYRIN SOLID SUPPORTS AND DEVICES  
[ Useful in the separation of neutral and anionic species, phosphate ester  
hydrolysis, magnetic resonance imaging and photodynamic therapy]  
FULL TEXT: 3525 lines

4/6/32 (Item 19 from file: 654)  
02603461  
TEXAPHYRIN-OLIGONUCLEOTIDE CONJUGATES  
[Effective for treating hypoxic areas of solid neoplasms]  
FULL TEXT: 2503 lines

4/6/33 (Item 20 from file: 654)  
02598892  
PYROLE NITROGEN-SUBSTITUTED TEXAPHYRINS  
[Radiation sensitizers; tumor therapy]  
FULL TEXT: 2334 lines

4/6/34 (Item 21 from file: 654)  
02596012  
METHOD OF MAGNETIC RESONANCE IMAGE ENHANCEMENT  
[Texaphyrins as radiation sensitizers]  
FULL TEXT: 2431 lines

4/6/35 (Item 22 from file: 654)  
02581903  
TEXAPHYRINS AND USES THEREOF  
[ Useful in photodynamic therapy and light-induced cleavage of a polymer of  
deoxyribonucleic acid]  
FULL TEXT: 2640 lines

4/6/36 (Item 23 from file: 654)  
02581803  
METHODS OF USING BIOLOGICALLY ACTIVE DIMERIZED POLYPEPTIDE FUSIONS TO  
DETECT PDGF  
[Receptor binding assay]  
FULL TEXT: 4114 lines

4/6/37 (Item 24 from file: 654)  
02555423  
COVALENTLY CROSS-LINKED OLIGONUCLEOTIDES  
[ Bonding strands or one strand at different sites; RNA mimics fixed in  
spatial conformation; nuclease resistant mimics of binding receptors for  
nucleic acid-binding proteins; 5-lipoxygenase inhibitors; diagnosis;  
analyzing]  
FULL TEXT: 4329 lines

4/6/38 (Item 25 from file: 654)

02069666

METHOD FOR VISUALIZING THE BASE SEQUENCE OF NUCLEIC ACID POLYMERS

[ Replacing oxygen in polymer with sulfur, then complexing with metal; measuring difference in electroconductivity with tip of scanning probe microscope]

FULL TEXT: 650 lines

?

PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES

? ds

Set	Items	Description
S1	115	(RNA(W)ANALOG) OR (RNA(W)NUCLEOSIDE(W)ANALOG)
S2	101	RD (unique items)
S3	37	S2 AND (VIRUS OR VIRAL)
S4	38	S2 AND (VIRUS OR VIRAL OR HIV)
S5	63	S2 NOT S4

? t s4/7/1,6-13

4/7/1 (Item 1 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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08749467 96357031

RNA replication by a respiratory syncytial **virus RNA analog** does not obey the rule of six and retains a nonviral trinucleotide extension at the leader end.

Samal SK; Collins PL

Regional College of Veterinary Medicine, University of Maryland, College Park 20742, USA.

J Virol (UNITED STATES) Aug 1996, 70 (8) p5075-82, ISSN 0022-538X  
Journal Code: KCV

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Genome analogs ("minigenomes") of Sendai and measles viruses replicate efficiently only if their nucleotide length is an even multiple of six, a requirement called the rule of six (P. Calain and L. Roux, J. Virol. 67:4822-4830, 1993; M. S. Sidhu, J. Chan, K. Kaelin, P. Spielhofer, F. Radecke, H. Schneider, M. Masurekar, P. C. Dowling, M. A. Billeter, and S. A. Udem, Virology 208:800-807, 1995). The existence of a comparable requirement was tested for respiratory syncytial **virus** (RSV), which also is a member of family Paramyxoviridae and whose natural genome length also is a multiple of six. An internally truncated analog of RSV positive-sense replicative intermediate RNA (antigenome) bearing the chloramphenicol acetyltransferase gene as a reporter was synthesized from cDNA in vitro. This RNA was transfected into cells which were infected with RSV as a helper. Miniantigenomic RNA was indistinguishable from previously studied negative-sense minigenome RNA in its ability to participate in transcription, RNA replication, and incorporation into transmissible particles. Sixteen miniantigenomes which were of slightly different lengths and which in aggregate represented multiples of a wide range of integers including 1 to 15 were constructed. During transfection and two serial passages, the various miniantigenomes were essentially indistinguishable with regard to the efficiency of transcription, RNA replication, and packaging into transmissible particles. Progeny minigenomes of six different mutants were recovered postpassage, copied into cDNA, cloned, and sequenced completely. The length of each of these RNAs was found to have remained unchanged during replication and passage. Thus, RSV transcription and replication appear to lack the requirement that the template length be an even multiple of an integer such as six, which for Sendai and measles viruses is obligatory for nucleocapsid function. Each of the in vitro-synthesized miniantigenomes used in transfection contained a nonviral extension of three nucleotides, GGG, on the 5' (leader) end contributed by

the T7 promoter. The termini of the recovered minigenomes were examined for five mutants by circularization followed cDNA synthesis, amplification, cloning, and sequencing. Unexpectedly, each recovered minigenome contained the complement of this nonviral extension on the 3' (leader) end, showing that it had been faithfully copied and maintained during RNA replication and passage. The nonviral trinucleotide did not appear to affect the activity of the template.

4/7/6 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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129000579 CA: 129(1)579c PATENT  
Induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA  
INVENTOR(AUTHOR): Loeb, Lawrence A.; Mullins, James I.  
LOCATION: USA  
ASSIGNEE: University of Washington; Loeb, Lawrence A.; Mullins, James I.  
PATENT: PCT International ; WO 9818324 A1 DATE: 19980507  
APPLICATION: WO 97US19670 (19971027) \*US 29404 (19961028) \*US 40535 (19970227)  
PAGES: 60 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A01N-043/04A; A61K-031/70B; C12N-007/04B; C12N-007/06B; C12Q-001/68B; C12Q-001/70B  
DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; HU; ID; IL; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; US; UZ; VN; YU; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; KE; LS; MW; SD ; SZ; UG; ZW; AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML; MR; NE; SN; TD; TG  
SECTION:  
CA201005 Pharmacology  
CA263XXX Pharmaceuticals  
IDENTIFIERS: ribonucleoside analog virus mutation antiviral, screening antiviral ribonucleoside analog virus mutation, combinatorial library antiviral ribonucleoside analog  
DESCRIPTORS:  
mRNA...  
analogs; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method  
Antiviral agents... Anti-AIDS drugs... Combinatorial library... Coronavirus ... Dengue virus... DNA... Drug delivery systems... Drug screening... Feline immunodeficiency virus... Feline leukemia virus... Hepatitis A virus ... Hepatitis B virus... Hepatitis B... Hepatitis C virus... Hepatitis C... Human immunodeficiency virus 1... Human immunodeficiency virus 2... Human immunodeficiency virus... Human T-lymphotropic virus 1... Human T-lymphotropic virus 2... Influenza virus... Mutation... Nucleoside analogs ... Oral drug delivery systems... Parenteral solutions(drug delivery systems)... Respiratory syncytial virus... Retroviridae... RNA viruses... RNA... Simian immunodeficiency virus... Tissue culture(animal)... Vesicular stomatitis virus...  
induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method  
T cell leukemia...  
inhibitors; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method  
Mutagens...  
mutagenic potential; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method  
Virus...  
mutation rate; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method  
Reactive oxygen species...  
reaction; induction of viral mutation by incorporation of miscoding

ribonucleoside analogs into viral RNA, and screening method  
Leukemia inhibitors.  
T cell leukemia inhibitors; induction of viral mutation by  
incorporation of miscoding ribonucleoside analogs into viral RNA, and  
screening method

Nucleic acids...

templates; induction of viral mutation by incorporation of miscoding  
ribonucleoside analogs into viral RNA, and screening method

CAS REGISTRY NUMBERS:

9014-24-8 and RNA polymerase II; induction of viral mutation by  
incorporation of miscoding ribonucleoside analogs into viral RNA, and  
screening method  
66-22-8 73-24-5 biological studies, RNA nucleoside analog replacement of;  
induction of viral mutation by incorporation of miscoding  
ribonucleoside analogs into viral RNA, and screening method  
58-61-7D 58-96-8D 65-46-3D 118-00-3D 957-77-7D 1867-73-8D 2140-64-9D  
2140-69-4D 2149-76-0D 3066-86-2D 3868-31-3D 3868-32-4D 7803-88-5D  
13007-43-7D 23899-77-6D 25130-29-4D 33962-59-3D 34218-77-4D  
39007-51-7D 39007-52-8D 39638-73-8D 39708-01-5D 53337-88-5D  
53337-89-6D 57294-74-3D 59495-20-4D 72055-62-0D 82773-20-4D  
100997-68-0D 108060-85-1D 137248-64-7D 207340-54-3D 207340-56-5D  
207340-58-7D derivs., induction of viral mutation by incorporation of  
miscoding ribonucleoside analogs into viral RNA, and screening method  
7782-44-7D free radicals, reaction; induction of viral mutation by  
incorporation of miscoding ribonucleoside analogs into viral RNA, and  
screening method  
65-71-4 71-30-7 957-77-7 1867-73-8 2140-64-9 2140-69-4 2149-76-0  
3066-86-2 3868-31-3 3868-32-4 7803-88-5 13007-43-7 23899-77-6  
25130-29-4 33962-59-3 34218-77-4 39007-51-7 39007-52-8 39638-73-8  
39708-01-5 53337-88-5 53337-89-6 57294-74-3 59495-20-4 72055-62-0  
82773-20-4 100997-68-0 108060-85-1 137248-64-7 207340-54-3  
207340-56-5 207340-58-7 induction of viral mutation by incorporation  
of miscoding ribonucleoside analogs into viral RNA, and screening  
method  
65-46-3 73-40-5 RNA nucleoside analog replacement of; induction of viral  
mutation by incorporation of miscoding ribonucleoside analogs into  
viral RNA, and screening method

4/7/7 (Item 2 from file: 399)  
DIALOG(R) File 399:CA SEARCH(R)  
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120024950 CA: 120(3)24950g CONFERENCE PROCEEDING  
Rescue of synthetic helper-dependent analogs of the genomic RNAs of  
respiratory syncytial virus and parainfluenza virus type 3  
AUTHOR(S): Collins, Peter L.; Stec, David S.; Kuo, Lili; Hill, Myron G.,  
III; Camargo, Ena; Dimock, Kenneth; Grosfeld, Haim; Mink, Michael A.  
LOCATION: Lab. Infect. Dis., Natl. Inst. Health, Bethesda, MD, 20892, USA  
JOURNAL: Vaccines 93, (Annu. Meet.), 10th EDITOR: Ginsberg, Harold S  
(Ed), DATE: 1993 PAGES: 259-64 CODEN: 59HUAJ LANGUAGE: English  
MEETING DATE: 920000 PUBLISHER: Cold Spring Harbor Lab., Cold Spring  
Harbor, N. Y  
SECTION:  
CA203006 Biochemical Genetics  
CA215XXX Immunochemistry  
IDENTIFIERS: respiratory syncytial parainfluenza virus RNA analog  
DESCRIPTORS:  
Virus, animal, parainfluenza 3... Virus, animal, respiratory syncytial...  
genomic RNA of, rescue of synthetic helper-dependent analogs of  
Ribonucleic acids, viral...  
of parainfluenza and respiratory syncytial viruses, rescue of synthetic  
helper-dependent analogs of

4/7/8 (Item 3 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

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119113265 CA: 119(11)113265j JOURNAL

Rescue of a 7502-nucleotide (49.3% of full-length) synthetic analog of respiratory syncytial virus genomic RNA

AUTHOR(S): Collins, Peter L.; Mink, Michael A.; Hill, Myron G., III; Camargo, Ena; Grosfeld, Haim; Stec, David S.

LOCATION: Lab. Infect. Dis., Natl. Inst. Allergy and Infect. Dis., Bethesda, MD, 20892, USA

JOURNAL: Virology DATE: 1993 VOLUME: 195 NUMBER: 1 PAGES: 252-6

CODEN: VIRLAX ISSN: 0042-6822 LANGUAGE: English

SECTION:

CA210006 Microbial Biochemistry

IDENTIFIERS: RNA synthetic rescue respiratory syncytial virus, encapsidation large synthetic RNA analog

DESCRIPTORS:

Ribonucleic acids, viral...

large synthetic analog, rescue of, of human respiratory syncytial virus  
Virus, animal, human respiratory syncytial...

RNA of, rescue of large synthetic analog of

Deoxyribonucleic acids, complementary...

viral RNA analog constructed from, rescue of, of human respiratory syncytial virus

4/7/9 (Item 4 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

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119067312 CA: 119(7)67312x PATENT

Duplex-forming polynucleotide conjugates

INVENTOR(AUTHOR): Ma, Michael Y X.; Reid, Lorne S.; Sumner-Smith, Martin; Barnett, Richard W.

LOCATION: Can.,

ASSIGNEE: Allelix Biopharmaceuticals Inc.

PATENT: PCT International ; WO 9306122 A1 DATE: 930401

APPLICATION: WO 92CA423 (920925) \*US 766550 (910927)

PAGES: 56 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: C07H-021/04A; C07H-021/00B; C12P-019/34B; A61K-048/00B DESIGNATED COUNTRIES: AT; AU; BB; BG; BR; CA; CH; CS; DE; DK; ES; FI; GB; HU; JP; KP; KR; LK; LU; MG; MN; MW; NL; NO; PL; RO; RU; SD; SE DESIGNATED REGIONAL: AT; BE; CH; DE; DK; ES; FR ; GB; GR; IE; IT; LU; MC; NL; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML; MR; SN; TD; TG

SECTION:

CA209014 Biochemical Methods

CA201XXX Pharmacology

CA233XXX Carbohydrates

IDENTIFIERS: polynucleotide duplex linker prepn therapeutic, Tar analog linker Tat binding

DESCRIPTORS:

Cattle...

alk. phosphatase of intestine of calf, duplex-forming polynucleotide conjugates stability with respect to

Intestine, composition...

alk. phosphatase of, of calf, duplex-forming polynucleotide conjugates stability with respect to

Antigens...

immunogenic epitopes of, linker-contg. duplex-forming polynucleotide conjugate in duplex form presenting

Linking agents...

in duplex-forming polynucleotide conjugate prepn., for therapeutic applications

Ribonucleic acid formation factors, gene tat...

linker-contg. duplex-forming polynucleotide conjugate binding, of human immunodeficiency virus, for therapeutic applications

Virus, animal, human immunodeficiency...

linker-contg. duplex-forming polynucleotide conjugate binding Tat protein of, for therapeutic applications

Proteins, specific or class, ligand-binding...

linker-contg. duplex-forming polynucleotide conjugates, for therapeutic applications

Animal cell line, Hut 78... Lymphocyte, T-cell...

linker-contg. duplex-forming polynucleotide conjugates uptake by Nucleotides, poly-, polymers... Nucleotides, poly-, conjugates, polymers... Nucleotides, poly-, deoxyribo-, polymers...

linker-contg., duplex-forming, prepn. of, for therapeutic applications

Vigna radiata...

nuclease of, duplex-forming polynucleotide conjugates stability with respect to

Biological transport...

of linker-contg. duplex-forming polynucleotide conjugates

Virus, animal...

protein regulating expression of gene of, linker-contg. duplex-forming polynucleotide conjugate binding, for therapeutic applications

Gene, animal...

protein regulating expression of, linker-contg. duplex-forming polynucleotide conjugate binding, for therapeutic applications

Virus, animal, human immunodeficiency 1...

Tat protein fragment from, binding of, to linker-contg. duplex-forming Tar hairpin RNA analog conjugates

CAS REGISTRY NUMBERS:

9037-44-9 duplex-forming polynucleotide conjugates stability with respect to

9001-78-9 duplex-forming polynucleotide conjugates stability with respect to, of calf intestine

9026-81-7 duplex-forming polynucleotide conjugates stability with respect to, of mung bean

148998-95-2 148998-96-3 EcoRI digestion of, linker-contg. duplex-forming polynucleotide conjugate prepn. for therapeutic applications in relation to

148915-79-1 linker-contg. duplex-forming Tar hairpin RNA analog conjugate binding of

148998-97-4 148998-98-5 148998-99-6 148999-00-2 148999-01-3 148999-02-4 linker-contg. Tar hairpin RNA analog, of HIV-1, Tat protein fragment binding to

148999-03-5 148999-04-6 148999-07-9 linker-contg. Tar hairpin RNA analog, of HIV-1, Tat protein sequence binding to

110894-23-0P 125607-09-2P 146668-73-7P 146669-12-7P prepn. of, as linker for duplex-forming polynucleotide conjugate prepn.

110675-04-2P 123706-69-4P 146669-10-5P 146669-11-6P prepn. of, in linker prepn. for duplex-forming polynucleotide conjugate prepn.

40615-36-9 89992-70-1 reaction of, in linker prepn. for duplex-forming polynucleotide conjugate prepn.

112-27-6 504-63-2 2615-15-8 3937-56-2 reaction of, with dimethoxytrityl chloride

148999-09-1 stability of, to nucleases, linker-contg. duplex-forming polynucleotide conjugates in relation to

148999-06-8 Tar hairpin RNA analog fragments, of HIV-1, Tat protein fragment binding to

148999-05-7 Tar hairpin RNA analog, of HIV-1, Tat protein fragment binding to

148999-08-0 Tar hairpin RNA analog, of HIV-1, Tat protein sequence binding to

116052983 CA: 116052983f PATENT

Hybridization assay using midvariant RNA analogs and Q.beta. replicase

INVENTOR(AUTHOR): Stefano, James E.

LOCATION: USA

ASSIGNEE: Gene-Trak Systems

PATENT: European Pat. Appl. ; EP 454461 A1 DATE: 911030

APPLICATION: EP 91303739 (910425) \*US 514518 (900425) \*US 514161 (900425)

PAGES: 25 pp. CODEN: EPXXDW LANGUAGE: English CLASS: C12Q-001/68A

DESIGNATED COUNTRIES: AT; BE; CH; DE; DK; ES; FR; GB; IT; LI; LU; NL; SE

SECTION:

CA203005 Biochemical Genetics

IDENTIFIERS: hybridization assay amplification midvariant RNA, Q beta replicase hybridization assay, nucleic acid detection quantitation

DESCRIPTORS:

Chlamydia trachomatis...

detection of, midvariant RNA mutant-contg. hybridization probe for, Q.beta. replicase amplification in relation to

Ribonucleic acids, viral, MDV-1...

hybridization probe contg. mutant of, in nucleic acid detection and quantitation, Q.beta. replicase amplification in relation to

Nucleic acid hybridization...

mutant midvariant RNA-contg. probes for, Q.beta. replicase amplification in presence of midvariant RNA replication-inhibiting agent in relation to

CAS REGISTRY NUMBERS:

1239-45-8D homodimer, replication of midvariant RNA resistant to, in hybridization assay for nucleic acid detection and quantitation

138546-75-5 human immunodeficiency virus detection with, Q.beta. replicase amplification in presence of propidium iodide in

138546-73-3 hybridization probes contg., in hybridization assay for nucleic acid detection and quantitation, Q.beta. replicase-based amplification in relation to

9026-28-2 in hybridization assay for detection and quantitation of nucleic acids, midvariant RNA analog-contg. probe amplification using

65-61-2 83-89-6 92-62-6 518-67-2 1239-45-8 25535-16-4 replication of midvariant RNA resistant to, in hybridization assay for nucleic acid detection and quantitation

4/7/11 (Item 6 from file: 399)

DIALOG(R) File 399:CA SEARCH(R)

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79013954 CA: 79(3)13954v JOURNAL

Rous sarcoma virus. Effects of nucleoside analogs on virus synthesis

AUTHOR(S): Brdar, B.; Rifkin, D. B.; Reich, E.

LOCATION: Rockefeller Univ., New York, N. Y.

JOURNAL: J. Biol. Chem. DATE: 1973 VOLUME: 248 NUMBER: 7 PAGES:

2397-408 CODEN: JBCHA3 LANGUAGE: English

SECTION:

CA903002 Biochemical Interactions

IDENTIFIERS: bromotubercidin virus RNA, fluorouridine virus RNA, virus RNA nucleoside analog

DESCRIPTORS:

Ribonucleic acids...

formation of, bromotubercidin and fluorouridine effect on

Virus, animal...

Rous sarcoma, bromotubercidin and fluorouridine effect on

Proteins...

viral, formation of, bromotubercidin inhibition of

CAS REGISTRY NUMBERS:

21193-80-6 virus formation inhibition by

316-46-1 virus formation response to

4/7/12 (Item 7 from file: 399)  
DIALOG(R) File 399:CA SEARCH(R)  
(c) 1999 American Chemical Society. All rts. reserv.

74109742 CA: 74(21)109742x JOURNAL  
Thermal activation of the antiviral activity of synthetic double-stranded  
polyribonucleotides  
AUTHOR(S): De Clercq, Erik; Wells, Robert D.; Grant, Robert C.; Merigan,  
Thomas G.  
LOCATION: Med. Sch., Stanford Univ., Stanford, Calif.  
JOURNAL: J. Mol. Biol. DATE: 1971 VOLUME: 56 NUMBER: 1 PAGES: 83-100  
CODEN: JMOBAK LANGUAGE: English  
SECTION:  
CA813000 Immunochemistry  
IDENTIFIERS: polynucleotide virus inhibition, RNA analog virus inhibition  
, interferon inducer virus inhibition  
DESCRIPTORS:  
Viruses, animal...  
nucleotide inhibition of, thermal activation of  
Nucleotides, biological studies...  
virus inhibition by double-stranded poly-, thermal activation of  
CAS REGISTRY NUMBERS:  
26182-09-2 virus inhibition by, thermal activation of

4/7/13 (Item 1 from file: 357)  
DIALOG(R) File 357:Derwent Biotechnology Abs  
(c) 1999 Derwent Publ Ltd. All rts. reserv.

0121595 DBA Accession No.: 91-09237 PATENT  
Modified oligonucleotide analogs containing novel linkages - which modulate  
gene expression in therapy and diagnosis of virus and bacterium  
disease and tumor cell growth  
PATENT ASSIGNEE: Gilead-Sci. 1991  
PATENT NUMBER: WO 9106629 PATENT DATE: 910516 WPI ACCESSION NO.:  
91-164179 (9122)  
PRIORITY APPLIC. NO.: US 559957 APPLIC. DATE: 900730  
NATIONAL APPLIC. NO.: WO 90US6110 APPLIC. DATE: 901024  
LANGUAGE: English  
ABSTRACT: A new modified oligomer (I), or its derivatives, contains a  
nucleotide sequence which includes, in place of 1 or more conventional  
linkages between nucleotide residues, a linkage of formula -Y-CX<sub>2</sub>-Y-  
(where each Y = O or S; each X = stabilizing substitutions), while all  
other linkages are phosphodiester (or conventional substitutions). Also  
new are intermediate compounds (II), where B = purine or pyrimidine  
residue, or analogous residue; each X' = stabilizing group, but not  
both H; R = aliphatic or aromatic hydrocarbyl, optionally containing a  
heterocycle; and Pr = H or protecting group. More specifically, (I) are  
of formula (III), where each Z = P(O)O or CX<sub>2</sub>; n = 1-200; each m = 0 or  
1; and at least one Z is CX<sub>2</sub>. Each X = H, or CX<sub>2</sub> is one of 6 specified  
heterocycles. (I) can bind to target nucleic acid, so are especially  
useful (in antisense DNA or antisense RNA procedures) for treating  
genetically-mediated diseases. (I) are resistant to nucleases, show  
improved cell penetration and, because they do not exhibit  
diastereoisomerism, can bind strongly to target DNA or RNA. (42pp)  
? t s4/3, ab/15, 19, 21

4/3, AB/15 (Item 2 from file: 654)  
DIALOG(R) File 654:US Pat.Full.  
(c) format only 1999 The Dialog Corp. All rts. reserv.

02895559

Utility



COMPOSITIONS AND METHODS OF DEVELOPING OLIGONUCLEOTIDES AND OLIGONUCLEOTIDE  
ANALOGS HAVING ANTIVIRAL ACTIVITY

PATENT NO.: 5,856,085

ISSUED: January 05, 1999 (19990105)

INVENTOR(s): Wang, Jin-Feng, Hummelstown, PA (Pennsylvania), US (United  
States of America)  
Pan, Weihua, Hershey, PA (Pennsylvania), US (United States of  
America)

ASSIGNEE(s): The Penn State Research Foundation, (A U.S. Company or  
Corporation), University Park, PA (Pennsylvania), US (United  
States of America)  
[Assignee Code(s): 31470]

APPL. NO.: 8-566,216

FILED: December 01, 1995 (19951201)

5/6/1 (Item 1 from file: 155)  
09181310 97461553

Specific binding of aminoglycosides to a human rRNA construct based on a DNA polymorphism which causes aminoglycoside-induced deafness.  
Oct 7 1997

5/6/2 (Item 2 from file: 155)  
08445977 96072776

Probing the structure of long single-stranded DNA fragments with neocarzinostatin chromophore. Extension of the base-catalyzed bulge-specific reaction.  
Nov 21 1995

5/6/3 (Item 3 from file: 155)  
08169571 94173585

Did reflexive catalysts drive chemical evolution?  
Feb 1994

5/6/4 (Item 4 from file: 155)  
08068795 95074075

Spliced leader-associated RNA of trypanosomes. Sequence conservation and association with protein components common to trans-spliceosomal ribonucleoproteins.  
Dec 2 1994

5/6/5 (Item 5 from file: 155)  
07001438 91279452

Duplex stabilities of phosphorothioate, methylphosphonate, and RNA analogs of two DNA 14-mers.  
Jun 11 1991

5/6/6 (Item 6 from file: 155)  
01500327 72183778

Covalent attachment of a peptidyl-transfer RNA analog to the 50S subunit of Escherichia coli ribosomes.  
Apr 1972

5/6/7 (Item 1 from file: 5)  
11708796 BIOSIS NO.: 199800490527

1,5-Anhydro-2-deoxy-D-altritol oligonucleotides as conformationally restricted analogues of RNA.  
1998

5/6/8 (Item 2 from file: 5)  
11604587 BIOSIS NO.: 199800386318

Correlating structure and stability of DNA duplexes with incorporated 2'-O-modified RNA analogues.  
1998

5/6/9 (Item 3 from file: 5)

11444850 BIOSIS NO.: 199800226182  
Ribosome-catalyzed peptide-bond formation with an A-site substrate  
covalently linked to 23S ribosomal RNA.  
1998

5/6/10 (Item 4 from file: 5)  
10355113 BIOSIS NO.: 199698810031  
Examining cooperative catalysis in phosphodiester hydrolysis.  
1996

5/6/11 (Item 5 from file: 5)  
09730968 BIOSIS NO.: 199598185886  
Parameters that influence the extent of site occupancy by a candidate  
telomere end-binding protein.  
1995

5/6/12 (Item 6 from file: 5)  
09335985 BIOSIS NO.: 199497344355  
A strongly base-paired terminal helix is required for the accumulation of a  
5S RNA analog in vivo.  
1994

5/6/13 (Item 7 from file: 5)  
05582622 BIOSIS NO.: 000083055762  
PHOTOCROSSLINKING OF THE SIGNAL SEQUENCE OF NASCENT PREPROLACTIN TO THE  
54-KILODALTON POLYPEPTIDE OF THE SIGNAL RECOGNITION PARTICLE  
1986

5/6/14 (Item 8 from file: 5)  
05274838 BIOSIS NO.: 000082115463  
THIRD SITE OF THE 70S RIBOSOME FOR AMINOACYL TRANSFER RNA  
ANALOG BINDING  
1986

5/6/15 (Item 9 from file: 5)  
05049391 BIOSIS NO.: 000081007515  
AFFINITY LABELING OF ESCHERICHIA-COLI RIBOSOMES WITH A DERIVATIVE OF  
HEPTAURIDYLIC-ACID-5'-TRIPHOSPHATE AS A MESSENGER RNA ANALOG  
1985

5/6/16 (Item 10 from file: 5)  
04739049 BIOSIS NO.: 000080042176  
ANTIPROLIFERATIVE AND IMMUNOMODULATORY ACTIONS OF BETA INTERFERON AND  
DOUBLE-STRANDED RNA INDIVIDUALLY AND IN COMBINATION ON HUMAN BLADDER  
TUMOR XENOGRAFTS IN NUDE MICE  
1985

5/6/17 (Item 11 from file: 5)  
04331642 BIOSIS NO.: 000078061186  
USE OF 5 FLUORODEOXY CYTIDINE AND TETRA HYDRO URIDINE TO EXPLOIT HIGH  
LEVELS OF DEOXY CYTIDYLATE DEAMINASE IN TUMORS TO ACHIEVE DNA DIRECTED  
AND TARGET DIRECTED THERAPIES  
1984

5/6/18 (Item 12 from file: 5)  
03827525 BIOSIS NO.: 000075005598

5/6/19 (Item 13 from file: 5)  
02923027 BIOSIS NO.: 000069031145  
AN ENERGY TRANSFER EQUILIBRIUM BETWEEN 2 IDENTICAL COPIES OF A RIBOSOME  
BOUND FLUORESCENT TRANSFER RNA ANALOG IMPLICATIONS FOR THE  
POSSIBLE STRUCTURE OF CODON ANTI CODON COMPLEXES  
1979

5/6/20 (Item 14 from file: 5)  
02124538 BIOSIS NO.: 000063039534  
PUROMYCIN INHIBITION OF EUKARYOTIC RIBOSOMES DIFFERENCES IN SENSITIVITY  
BETWEEN POLY PEPTIDE SYNTHESIS DIRECTED BY ENDOGENOUS MESSENGER RNA AND  
SYNTHETIC TEMPLATES INCLUDING POLY URIDYLIC-ACID  
1976

5/6/21 (Item 1 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

New photoreactive RNA analogs

5/6/22 (Item 2 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Mutagenesis of nucleic acids by making copies incorporating base analogs  
capable of inducing mutation in random mutagenesis PCR method

5/6/23 (Item 3 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Structural aspects of nucleic acid analogs and antisense oligonucleotides

5/6/24 (Item 4 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Chemistry of .alpha.-amino nitriles. XVII. Oligo(nucleodipeptamidinium  
salts

5/6/25 (Item 5 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Hybridization and footprinting methods to characterize the interactions  
of 16 S rRNA analogs for identification of antibiotics

5/6/26 (Item 6 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Nonionic Analogs of RNA with Dimethylene Sulfone Bridges

5/6/27 (Item 7 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

NMR studies of a lead ribozyme and its non-cleavable analog

5/6/28 (Item 8 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Stabilized RNA analogs for antisense and ribozyme applications

5/6/29 (Item 9 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

New photocrosslinking analogs of mRNA

5/6/30 (Item 10 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis of arabinonucleic acid (tANA)

5/6/31 (Item 11 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Catalytic hydrolysis of 2',3'-cyclic adenosine monophosphate by aqua(2,2':6',2''-terpyridine)copper(II): breakdown of the analogy between activated phosphodiester and RNA

5/6/32 (Item 12 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

The solution structure of a d(C(TTCG)G) DNA hairpin and comparison to the unusually stable RNA analog

5/6/33 (Item 13 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Replacement of RNA hairpins by in vitro selected tetranucleotides

5/6/34 (Item 14 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Antibodies to ligand analogs and their utility in ligand-receptor assays

5/6/35 (Item 15 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis of tetrameric cyclic branched-RNA (lariat) modelling the introns of group II and nuclear pre-mRNA processing reaction (splicing)

5/6/36 (Item 16 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis of tetrameric branched RNA-DNA conjugate and branched-RNA analog and their comparative conformational studies by 500 MHz NMR spectroscopy

5/6/37 (Item 17 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Template-catalyzed oligomerization with an atactic glycerol-based

polynucleotide analog

5/6/38 (Item 18 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

The design and catalytic properties of a simplified ribonuclease P RNA

5/6/39 (Item 19 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

The U2 RNA analog of Trypanosoma brucei gambiense: implications for a splicing mechanism in trypanosomes

5/6/40 (Item 20 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synergistic effect of human immune interferon and double-stranded RNA against human colon carcinoma cells in vitro

5/6/41 (Item 21 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis of RNA analogs

5/6/42 (Item 22 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

Chemical studies on nucleic acid analogs

5/6/43 (Item 23 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

Analogues of lysyl-tRNA as probes of ribosome and elongation factor Tu structure and function

5/6/44 (Item 24 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

The primitive decoding system for the origin of life: a hypothesis

5/6/45 (Item 25 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

Interferon induction by a 2'-modified double-helical RNA, poly(2'-azido-2'-deoxyinosinic acid).polycytidylic acid

5/6/46 (Item 26 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

Interferon inducing activity of a 2'-modified double-stranded complex, poly (2'-azido-2'-deoxyinosinic acid).cntdot.poly(cytidylic acid)

5/6/47 (Item 27 from file: 399)  
DIALOG(R) File 399:(c) 1999 American Chemical Society. All rts. reserv.

A homologous series of photoreactive peptidyl-tRNAs for probing the ribosomal peptidyltransferase center

5/6/48 (Item 28 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Peptide donor activity of the N-acylamino acid esters of adenosine-5'-phosphate

5/6/49 (Item 29 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

N,.epsilon.-Acetyllysine transfer ribonucleic acid: a biologically active analogue of aminoacyl transfer ribonucleic acids

5/6/50 (Item 30 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Participation in protein biosynthesis of transfer ribonucleic acid bearing altered 3'-terminal ribosyl residues

5/6/51 (Item 31 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Interaction of polyriboguanilyc and polyribocytidylic acids

5/6/52 (Item 32 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Synthesis and properties of poly(2-methyladenylic acid). Formation of a poly(A).poly(U) complex with Hoogsteen-type hydrogen bonding

5/6/53 (Item 33 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Helical complexes of polyriboinosinic acid with copolymers of polyribocytidylic acid containing inosine, adenosine, and uridine residues

5/6/54 (Item 34 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Preparation of N-acylphenylalanyl-tRNA with alkylating groups for affinity-labeling for studying the peptidyl-transferase center of ribosomes

5/6/55 (Item 35 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Base pairing equilibriums between polynucleotides and complementary monomers

5/6/56 (Item 36 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Poly(ADP-ribose). Possibility of its regulatory action for development of genetic information

5/6/57 (Item 1 from file: 357)  
0203155 DBA Accession No.: 96-13926  
Useful properties of restriction enzymes that recognize interrupted  
palindromes - restriction endonuclease BstEII for DNA ligation and  
application in cloning 1996

5/6/58 (Item 2 from file: 357)  
0123272 DBA Accession No.: 91-10914  
Morpholino-based polymers containing purine or pyrimidine base -  
polynucleotide analog for e.g. hybridization probe, antisense RNA  
analog, etc. 1991

5/6/59 (Item 3 from file: 357)  
0103368 DBA Accession No.: 90-06059  
Mixed deoxyribo- and ribo-oligonucleotides with catalytic activity -  
construction of ribozyme hammerhead RNA analog containing  
DNA 1990

5/6/60 (Item 4 from file: 357)  
0098327 DBA Accession No.: 90-01018  
2'-O-tetrahydropyranyl-nucleoside derivatives useful as intermediate for  
RNA-related compounds in recombinant gene techniques - and in  
pharmaceutical industry 1989

5/6/61 (Item 1 from file: 654)  
02904196  
METHOD FOR IDENTIFYING INHIBITORS OF CDC2 PROTEIN KINASE FROM PNEUMOCYSTIS  
CARINII  
FULL TEXT: 1570 lines

5/6/62 (Item 2 from file: 654)  
02884917  
ASSAYING NUCLEOTIDES IN SOLUTION USING A FLUORESCENT INTENSITY QUENCHING  
EFFECT  
FULL TEXT: 899 lines

5/6/63 (Item 3 from file: 654)  
02586327  
CHEMICAL EVENT SELECTION BY SUICIDE SUBSTRATE CONJUGATES  
FULL TEXT: 3109 lines  
? ds

Set	Items	Description
S1	115	(RNA(W)ANALOG) OR (RNA(W)NUCLEOSIDE(W)ANALOG)
S2	101	RD (unique items)
S3	37	S2 AND (VIRUS OR VIRAL)
S4	38	S2 AND (VIRUS OR VIRAL OR HIV)
S5	63	S2 NOT S4

? t s5/7/22,35,41

5/7/22 (Item 2 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
(c) 1999 American Chemical Society. All rts. reserv.

126302361 CA: 126(23)302361t PATENT  
Mutagenesis of nucleic acids by making copies incorporating base analogs



capable of inducing mutation in random mutagenesis PCR method  
INVENTOR(AUTHOR): Williams, David; Brown, Daniel; Zaccolo, Manuella Carla  
; Gherardi, Ermanno  
LOCATION: UK,  
ASSIGNEE: Medical Research Council; Williams, David; Brown, Daniel;  
Zaccolo, Manuella Carla; Gherardi, Ermanno  
PATENT: PCT International ; WO 9711083 A1 DATE: 19970327  
APPLICATION: WO 96GB2333 (19960919) \*GB 9519425 (19950922) \*GB 962011  
(19960201)  
PAGES: 75 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: C07H-019/20A;  
C07H-019/10B; C12N-015/11B; C12N-015/01B DESIGNATED COUNTRIES: AL; AM; AT;  
AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CU; CZ; DE; DK; EE; ES; FI; GB; GE;  
HU; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN;  
MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; TJ; TM; TR; TT; UA; UG;  
US; UZ; VN; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: KE; LS  
; MW; SD; SZ; UG; AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC;  
NL; PT; SE; BF; BJ; CF; CG; CI

SECTION:

CA203001 Biochemical Genetics

CA233XXX Carbohydrates

IDENTIFIERS: nucleic acid base analog mutagenesis PCR, RNA nucleoside  
analog mutagenesis PCR, DNA nucleoside analog mutagenesis PCR, random  
mutagenesis PCR nucleic acid analog

DESCRIPTORS:

Deoxyribonucleoside triphosphates... Nucleoside triphosphates...  
analogs; mutagenesis of nucleic acids by making copies incorporating  
base analogs capable of inducing mutation in random mutagenesis PCR  
method

DNA... Nucleic acids... PCR(polymerase chain reaction)... RNA...  
mutagenesis of nucleic acids by making copies incorporating base  
analogs capable of inducing mutation in random mutagenesis PCR method

Mutagenesis...  
random; mutagenesis of nucleic acids by making copies incorporating  
base analogs capable of inducing mutation in random mutagenesis PCR  
method

CAS REGISTRY NUMBERS:

88847-89-6 126128-42-5 189129-33-7 conversion to triphosphate;  
mutagenesis of nucleic acids by making copies incorporating base  
analogs capable of inducing mutation in random mutagenesis PCR method  
9014-24-8 mutagenesis of nucleic acids by making copies incorporating base  
analogs capable of inducing mutation in random mutagenesis PCR method  
139307-94-1P 173964-83-5P 189278-08-8P prepn. and incorporation as  
nucleoside analog; mutagenesis of nucleic acids by making copies  
incorporating base analogs capable of inducing mutation in random  
mutagenesis PCR method  
9012-90-2 Taq; mutagenesis of nucleic acids by making copies incorporating  
base analogs capable of inducing mutation in random mutagenesis PCR  
method

5/7/35 (Item 15 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

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116129494 CA: 116(13)129494g JOURNAL  
Synthesis of tetrameric cyclic branched-RNA (lariat) modelling the  
introns of group II and nuclear pre-mRNA processing reaction (splicing)  
AUTHOR(S): Sund, Christian; Agback, Peter; Chattopadhyaya, Jyoti  
LOCATION: Biomed. Cent., Univ. Uppsala, S-751 23, Uppsala, Swed.  
JOURNAL: Tetrahedron DATE: 1991 VOLUME: 47 NUMBER: 46 PAGES: 9659-74  
CODEN: TETRAB ISSN: 0040-4020 LANGUAGE: English  
SECTION:

CA233010 Carbohydrates

IDENTIFIERS: RNA tetrameric cyclic branched lariat, intron modeling  
nuclear mRNA, phenylxanthenyadenosine condensation uridine guanosine dimer

, adenosine phenylxanthonyl condensation uridine guanosine dimer  
 DESCRIPTORS:  
 Nuclear magnetic resonance...  
 in tetrameric cyclic branched RNA analog, of protons and phosphorus-31  
 Asymmetric synthesis and induction...  
 of cyclic branched (lariat) RNA analog  
 Regiochemistry...  
 of deprotection in synthesis of tetrameric cyclic branched RNA analog  
 Conformation and Conformers...  
 of tetrameric cyclic branched (lariat) RNA analog  
 Ribonucleic acids, messenger...  
 tetrameric cyclic branched analog of, regioselective synthesis of  
 CAS REGISTRY NUMBERS:  
 86988-31-0 coupling of, with guanosine phosphate deriv.  
 84315-17-3 coupling of, with guanosine-uridine dimer  
 99519-17-2 coupling of, with guanosine-uridine-adenosine trimer  
 139391-19-8 coupling of, with uridine deriv.  
 139413-38-0P prepn. and coupling of, with adenosine deriv.  
 139391-27-8P prepn. and coupling of, with cytidine deriv.  
 139391-25-6P prepn. and cyclocondensation of  
 139413-40-4P prepn. and deacylation of  
 139441-57-9P prepn. and deprotection of, tetrameric cyclic branched RNA  
 analog via  
 139391-21-2P prepn. and partial ammonium salt formation of  
 139391-20-1P 139391-23-4P 139413-39-1P prepn. and phosphorylation of  
 139413-43-7P prepn. and regioselective O-deprotection of  
 139413-41-5P regioselective prepn. and phosphorus-31 NMR of

5/7/41 (Item 21 from file: 399)  
 DIALOG(R) File 399:CA SEARCH(R)  
 (c) 1999 American Chemical Society. All rts. reserv.

103037699 CA: 103(5)37699f DISSERTATION  
 Synthesis of RNA analogs  
 AUTHOR(S): Mazur, Wieslaw Adam  
 LOCATION: City Univ. New York, New York, NY, USA  
 DATE: 1984 PAGES: 128 pp. CODEN: DABBBA LANGUAGE: English CITATION:  
 Diss. Abstr. Int. B 1985, 45(11), 3509 AVAIL: Univ. Microfilms Int., Order  
 No. DA8501157

SECTION:  
 CA133010 Carbohydrates  
 IDENTIFIERS: RNA analog  
 DESCRIPTORS:  
 Ribonucleic acids, analogs...  
 synthesis of  
 ? ds

Set	Items	Description
S1	115	(RNA(W)ANALOG) OR (RNA(W)NUCLEOSIDE(W)ANALOG)
S2	101	RD (unique items)
S3	37	S2 AND (VIRUS OR VIRAL)
S4	38	S2 AND (VIRUS OR VIRAL OR HIV)
S5	63	S2 NOT S4

? logoff

10feb99 11:32:21 User233835 Session D238.3  
 \$1.25 0.416 DialUnits File155  
 \$0.00 11 Type(s) in Format 6  
 \$0.20 1 Type(s) in Format 7  
 \$0.20 12 Types  
 \$1.45 Estimated cost File155  
 \$2.56 0.488 DialUnits File5  
 \$0.00 14 Type(s) in Format 6

\$0.00 14 Types  
 \$2.56 Estimated cost File5  
 \$7.30 0.622 DialUnits File399  
 \$19.35 43 Type(s) in Format 6  
 \$24.50 10 Type(s) in Format 7  
 \$43.85 53 Types  
 \$51.15 Estimated cost File399  
 \$1.10 0.126 DialUnits File357  
 \$0.00 5 Type(s) in Format 6  
 \$2.08 1 Type(s) in Format 7  
 \$2.08 6 Types  
 \$3.18 Estimated cost File357  
 \$0.46 0.028 DialUnits File351  
 \$0.46 Estimated cost File351  
 \$18.91 3.439 DialUnits File654  
 \$0.00 28 Type(s) in Format 6  
 \$2.70 3 Type(s) in Format 4 (UDF)  
 \$2.70 31 Types  
 \$21.61 Estimated cost File654  
 OneSearch, 6 files, 5.118 DialUnits FileOS  
 FTSNET 0.450 Hrs.  
 \$80.41 Estimated cost this search  
 \$82.54 Estimated total session cost 5.938 DialUnits  
 Logoff: level 99.01.29 D 11:32:22

Logging in to Dialog

Trying 9158046...Open

DIALOG INFORMATION SERVICES

PLEASE LOGON:

\*\*\*\*\*

ENTER PASSWORD:

t840lcpq

\*\*\*\*\*

Welcome to DIALOG

Dialog level 99.01.29D

Last logoff: 10feb99 11:32:22

Logon file001 10feb99 13:17:45

\*\*\*\*\* The DIALORDER suppliers DYNAMIC and FILEDOC are no longer \*\*\*\*\*  
 \*\*\*\*\* in business. Please do not use them. \*\*\*\*\*

\*\*\*\*\* File 265: Please use file 266 as file 265 is no longer \*\*\*\*\*  
 \*\*\*\*\* available. \*\*\*\*\*

\*\*\*\*\* The MASIS DIALORDER service has been discontinued. For \*\*\*\*\*  
 \*\*\*\*\* details, please contact MARUZEN CO. LTD, at 3-3272-3496. \*\*\*\*\*

\*\*\*\*\* Files 100 and 552 have been removed from DIALOG. \*\*\*\*\*

\*\*\*\*\* NEW CURRENT year ranges installed. \*\*\*\*\*

dialog

File 1:ERIC 1966-1999/Feb

(c) format only 1999 The Dialog Corporation

\*File 1: In 1999, RIE and CIJE sections will be added separately,  
 as soon as they arrive. UDs may be irregular. UD codes will change.

Set Items Description

? b 410

>>>'IALOG' not recognized as set or accession number  
? set hi ;set hi

10feb99 13:17:51 User233835 Session D239.1  
\$0.25 0.077 DialUnits File1  
\$0.25 Estimated cost File1  
FTSNET 0.016 Hrs.  
\$0.25 Estimated cost this search  
\$0.25 Estimated total session cost 0.077 DialUnits

File 410:Chronolog(R) 1981-1999 Jan/Feb  
(c) 1999 The Dialog Corporation plc

Set	Items	Description
-----	-------	-------------

?  
HIGHLIGHT set on as ''  
HIGHLIGHT set on as ''  
? b 155, 5, 399, 357, 351, 654

10feb99 13:18:29 User233835 Session D239.2  
\$0.00 0.041 DialUnits File410  
\$0.00 Estimated cost File410  
FTSNET 0.010 Hrs.  
\$0.00 Estimated cost this search  
\$0.25 Estimated total session cost 0.118 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 155:MEDLINE(R) 1966-1999/Mar W4

(c) format only 1999 Dialog Corporation

File 5:BIOSIS PREVIEWS(R) 1969-1999/Jan W3

(c) 1999 BIOSIS

File 399:CA SEARCH(R) 1967-1999/UD=13006

(c) 1999 American Chemical Society

\*File 399: Use is subject to the terms of your user/customer agreement.

RANK charge added; see HELP RATES 399.

File 357:Derwent Biotechnology Abs 1982-1999/Feb B1

(c) 1999 Derwent Publ Ltd

\*File 357: Effective October 1, DialUnit rates adjusted for unrounding.  
See HELP NEWS 357 for details.

File 351:DERWENT WPI 1963-1998/UD=9906;UP=9906;UM=9906

(c)1999 Derwent Info Ltd

\*File 351: From UD=9901, UM= and UP= update codes will "jump ahead."

See HELP NEWS 351 for info on Alert problems in updates 9851 and 9901.

File 654:US Pat.Full. 1990-1999/Feb 02

(c) format only 1999 The Dialog Corp.

\*File 654: Reassignment data now current through 08/20/98.

Reexamination, extension, expiration, reinstatement updated weekly.

Set	Items	Description
-----	-------	-------------

? s (ribonucleoside(w)analog)

	5565	RIBONUCLEOSIDE
	264852	ANALOG
S1	15	(RIBONUCLEOSIDE(W)ANALOG)

? rd

>>>Duplicate detection is not supported for File 351.

>>>Duplicate detection is not supported for File 654.

>>>Records from unsupported files will be retained in the RD set.

...completed examining records

S2	15	RD (unique items)
----	----	-------------------

2/6/1 (Item 1 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

A new short synthesis of deoxyhydanocidin derivatives

2/6/2 (Item 2 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA

2/6/3 (Item 3 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis of 7-halogenated 8-aza-7-deaza-2'-deoxyguanosines and related pyrazolo(3,4-d)pyrimidine 2'-deoxyribonucleosides

2/6/4 (Item 4 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Nucleic-acid analogs with constraint conformational flexibility in the sugar-phosphate backbone "tricyclo-DNA". Part 1. Preparation of ((5'R,6'R)-2'-deoxy-3',5'-ethano-5',6'-methano-.beta.-D-ribofuranosyl)thymine and -adenine, and the corresponding phosphoramidites for oligonucleotide synthesis

2/6/5 (Item 5 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

2'-Deoxyribonucleoside analogs

2/6/6 (Item 6 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis of 5-methyl-2'-O-deoxycytidine analogs to determine monoclonal antibody specificity in the recognition of the 6-(p-bromobenzoylamino)caproyl radical

2/6/7 (Item 7 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis of optically active 2',3'-dideoxy-3'-oxa-4'-thio-ribonucleoside analogs by transposition of a leaving group on chiral oxathiolanes via a reductive-oxidative process

2/6/8 (Item 8 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Synthesis of cyclo pyrrolopyrimidine nucleoside analogs

2/6/9 (Item 9 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Stereospecific synthesis and antiviral properties of different

enantiomerically pure carbocyclic 2'-deoxyribonucleoside analogs derived from common chiral pool: (+)-(1R,5S)- and (-)-(1S,5R)-2-oxabicyclo(3.3.0)oct-6-en-3-one

2/6/10 (Item 10 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Anti-herpes simplex virus activity of 5-substituted 2-pyrimidinone nucleosides

2/6/11 (Item 11 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Thin-layer chromatography of purine bases and deoxyribonucleoside analogs. IV

2/6/12 (Item 12 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Recent studies on the antiviral and biochemical properties of 5-halo-5'-amino-deoxyribonucleosides

2/6/13 (Item 13 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Inhibition of the steroid-induced synthesis of .DELTA.6-3-keto steroid isomerase in Pseudomonas testosteroni by a new purine deoxyribonucleoside analog. 6-Chloro-8-aza-9-cyclo-pentylpurine

2/6/14 (Item 1 from file: 654)  
02788996  
METHOD OF MAKING 2'-O-ALKYL PYRIMIDINE RIBONUCLEOSIDES  
FULL TEXT: 1220 lines

2/6/15 (Item 2 from file: 654)  
02758777  
FLUORESCENT UNIVERSAL NUCLEIC ACID END LABEL  
[RNA and DNA with fluorescent groups formed by enzyme or chemical synthesis]  
FULL TEXT: 2052 lines  
? t s2/7/1,2,8,10

2/7/1 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
(c) 1999 American Chemical Society. All rts. reserv.

129041353 CA: 129(4)41353t JOURNAL  
A new short synthesis of deoxyhydantocidin derivatives  
AUTHOR(S): Renard, Annabelle; Kotera, Mitsuharu; Lhomme, Jean  
LOCATION: Chimie Bioorganique, L.E.D.S.S., Associe au CNRS, Universite Joseph Fourier, 38041, Grenoble, Fr.  
JOURNAL: Tetrahedron Lett. DATE: 1998 VOLUME: 39 NUMBER: 20 PAGES: 3129-3132 CODEN: TELEAY ISSN: 0040-4039 LANGUAGE: English PUBLISHER: Elsevier Science Ltd.  
SECTION:  
CA233009 Carbohydrates  
IDENTIFIERS: hydantoin deoxyribonucleoside analog prepn, deoxyhydantocidin analog prepn erythronolactol chiral synthon

DESCRIPTORS:

Deoxyribonucleosides.

hydantoin; short synthesis of deoxyhydantocidin derivs.

CAS REGISTRY NUMBERS:

95378-36-2 189996-60-9 208181-80-0P 208181-81-1P 208181-82-2P  
208181-83-3P 208181-84-4P 208181-85-5P 208181-86-6P 208181-87-7P  
short synthesis of deoxyhydantocidin derivs.

2/7/2 (Item 2 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

(c) 1999 American Chemical Society. All rts. reserv.

129000579 CA: 129(1)579c PATENT

Induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA

INVENTOR(AUTHOR): Loeb, Lawrence A.; Mullins, James I.

LOCATION: USA

ASSIGNEE: University of Washington; Loeb, Lawrence A.; Mullins, James I.

PATENT: PCT International ; WO 9818324 A1 DATE: 19980507

APPLICATION: WO 97US19670 (19971027) \*US 29404 (19961028) \*US 40535 (19970227)

PAGES: 60 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A01N-043/04A; A61K-031/70B; C12N-007/04B; C12N-007/06B; C12Q-001/68B; C12Q-001/70B

DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; HU; ID; IL; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; US; UZ; VN; YU; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; KE; LS; MW; SD ; SZ; UG; ZW; AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML; MR; NE; SN; TD; TG

SECTION:

CA201005 Pharmacology

CA263XXX Pharmaceuticals

IDENTIFIERS: ribonucleoside analog virus mutation antiviral, screening antiviral ribonucleoside analog virus mutation, combinatorial library antiviral ribonucleoside analog

DESCRIPTORS:

mRNA...

analogs; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method  
Antiviral agents... Anti-AIDS drugs... Combinatorial library... Coronavirus ... Dengue virus... DNA... Drug delivery systems... Drug screening... Feline immunodeficiency virus... Feline leukemia virus... Hepatitis A virus ... Hepatitis B virus... Hepatitis B... Hepatitis C virus... Hepatitis C... Human immunodeficiency virus 1... Human immunodeficiency virus 2... Human immunodeficiency virus... Human T-lymphotropic virus 1... Human T-lymphotropic virus 2... Influenza virus... Mutation... Nucleoside analogs ... Oral drug delivery systems... Parenteral solutions(drug delivery systems)... Respiratory syncytial virus... Retroviridae... RNA viruses... RNA... Simian immunodeficiency virus... Tissue culture(animal)... Vesicular stomatitis virus...

induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

T cell leukemia...

inhibitors; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

Mutagens...

mutagenic potential; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

Virus...

mutation rate; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

Reactive oxygen species...

reaction; induction of viral mutation by incorporation of miscoding

ribonucleoside analogs into viral RNA, and screening method

• Leukemia inhibitors...

• T cell leukemia inhibitors; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

Nucleic acids...

templates; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

CAS REGISTRY NUMBERS:

9014-24-8 and RNA polymerase II; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

66-22-8 73-24-5 biological studies, RNA nucleoside analog replacement of; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

58-61-7D 58-96-8D 65-46-3D 118-00-3D 957-77-7D 1867-73-8D 2140-64-9D 2140-69-4D 2149-76-0D 3066-86-2D 3868-31-3D 3868-32-4D 7803-88-5D 13007-43-7D 23899-77-6D 25130-29-4D 33962-59-3D 34218-77-4D 39007-51-7D 39007-52-8D 39638-73-8D 39708-01-5D 53337-88-5D 53337-89-6D 57294-74-3D 59495-20-4D 72055-62-0D 82773-20-4D 100997-68-0D 108060-85-1D 137248-64-7D 207340-54-3D 207340-56-5D 207340-58-7D derivs., induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

7782-44-7D free radicals, reaction; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

65-71-4 71-30-7 957-77-7 1867-73-8 2140-64-9 2140-69-4 2149-76-0 3066-86-2 3868-31-3 3868-32-4 7803-88-5 13007-43-7 23899-77-6 25130-29-4 33962-59-3 34218-77-4 39007-51-7 39007-52-8 39638-73-8 39708-01-5 53337-88-5 53337-89-6 57294-74-3 59495-20-4 72055-62-0 82773-20-4 100997-68-0 108060-85-1 137248-64-7 207340-54-3 207340-56-5 207340-58-7 induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

65-46-3 73-40-5 RNA nucleoside analog replacement of; induction of viral mutation by incorporation of miscoding ribonucleoside analogs into viral RNA, and screening method

2/7/8 (Item 8 from file: 399)

DIALOG(R) File 399;CA SEARCH(R)

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119117712 CA: 119(11)117712a JOURNAL  
 Synthesis of cyclo pyrrolopyrimidine nucleoside analogs  
 AUTHOR(S): Ibrahim, E. S.; Islam, I. E.; Abbasi, M. A.  
 LOCATION: Dep. Chem., Univ. Suez Canal, El-Azhar, Egypt,  
 JOURNAL: Delta J. Sci. DATE: 1991 VOLUME: 15 NUMBER: 2 PAGES: 110-21  
 CODEN: DJSCEs ISSN: 1012-5965 LANGUAGE: English  
 SECTION:  
 CA233009 Carbohydrates  
 IDENTIFIERS: cyclo pyrrolopyrimidine deoxyribonucleoside analog,  
 regioselective halogenation deoxyribonucleoside, nucleoside deoxyribo  
 intramol cyclocondensation, cyclonucleoside pyrrolopyrimidine deoxyribo  
 analog  
 DESCRIPTORS:  
 Nucleosides, pyrrolopyrimidine, preparation...  
 cyclo-, prepn. of  
 Cyclocondensation reaction, intramol.... Halogenation, regioselective...  
 of deoxyribonucleosides  
 Regiochemistry...  
 of halogenation of deoxyribonucleosides  
 CAS REGISTRY NUMBERS:  
 143919-23-7P 143919-24-8P 143919-25-9P 143919-26-0P prepn. and  
 intramol. cyclocondensation of, pyrrolopyrimidines cyclonucleoside



analogs from  
507-16-4P 144028-17-4 144028-18-2P prepn. of  
15676-19-4 83379-28-6 regioselective halogenation of

2/7/10 (Item 10 from file: 399)

DIALOG(R) File 399:CA SEARCH(R)

(c) 1999 American Chemical Society. All rts. reserv.

110185406 CA: 110(21)185406t JOURNAL

Anti-herpes simplex virus activity of 5-substituted 2-pyrimidinone nucleosides

AUTHOR(S): Lewandowski, Gail A.; Grill, Susan P.; Fisher, Michael H.; Dutschman, Ginger E.; Efange, Simon M. N.; Bardos, Thomas J.; Cheng, Yung Chi

LOCATION: Sch. Med., Univ. North Carolina, Chapel Hill, NC, 26599-7365, USA

JOURNAL: Antimicrob. Agents Chemother. DATE: 1989 VOLUME: 33 NUMBER: 3

PAGES: 340-4 CODEN: AMACCQ ISSN: 0066-4804 LANGUAGE: English

SECTION:

CA201005 Pharmacology

IDENTIFIERS: herpes virucide pyrimidinone deoxyribonucleoside analog

DESCRIPTORS:

Virus, animal, herpes simplex 1... Virus, animal, herpes simplex 2...

inhibition of, by pyrimidinone deoxyribonucleoside analogs

Molecular structure-biological activity relationship, virucidal...

of pyrimidinone deoxyribonucleoside analogs

Microbicidal and microbiostatic action, virucidal...

of pyrimidinone deoxyribonucleoside analogs, against herpes simplex viruses

CAS REGISTRY NUMBERS:

22003-31-2 93265-81-7 93265-82-8 101803-16-1 herpes simplex virus inhibition by

9002-06-6 9002-17-9 9012-90-2 in herpes simplex virus inhibition by pyrimidinone deoxyribonucleoside analogs

? t s2/3, ab/14

File 410:Chronolog(R) 1981-1999 Sep/Oct  
(c) 1999 The Dialog Corporation plc

Set	Items	Description
-----	-------	-------------

---  
? set hi ;set hi

HILIGHT set on as ''

**HILIGHT set on as ''**

? b 155, 5, 399, 357, 654

03nov99 10:30:31 User233835 Session D322.2

\$0.00 0.047 DialUnits File410

\$0.00 Estimated cost File410

\$0.07 TELNET

\$0.07 Estimated cost this search

\$0.26 Estimated total session cost 0.102 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 155:MEDLINE(R) 1966-1999/Dec W4

(c) format only 1999 Dialog Corporation

\*File 155: Medline updates are complete for 1999.

First update for 2000 will be added in mid-December.

File 5:Biosis Previews(R) 1969-1999/Oct W2

(c) 1999 BIOSIS

File 399:CA SEARCH(R) 1967-1999/UD=13118

(c) 1999 American Chemical Society

\*File 399: Use is subject to the terms of your user/customer agreement.

RANK charge added; see HELP RATES 399.

File 357:Derwent Biotechnology Abs 1982-1999/Sep B2

(c) 1999 Derwent Publ Ltd

\*File 357: Derwent changes DialUnit pricing from May 1, 1999. See

HELP DERWENT for details.

File 654:US Pat.Full. 1990-1999/Oct 26

(c) format only 1999 The Dialog Corp.

\*File 654: Reassignment data current through 07/09/99.

Set	Items	Description
-----	-------	-------------

---  
? s (aminocytidine or ethenocytidine or methylcytidine or hydroxycytidine or dimethylcytidine or hydroxyethylcytidine or chlorocytidine or bromocytidine or aminocytidine or nitrosocytidine or hydroxyalkylcytidine or thioalkyl cytidine or (cytidine(w)glycol) or hydroxyuridine or hydroxyethyluridine) >>>Command is too long.

? s (aminocytidine or ethenocytidine or methylcytidine or hydroxycytidine or dimethylcytidine or hydroxyethylcytidine or chlorocytidine or bromocytidine or aminocytidine or nitrosocytidine)

<-----User Break----->

u!

? s (aminocytidine or ethenocytidine or methylcytidine or hydroxycytidine or dimethylcytidine or hydroxyethylcytidine or chlorocytidine or bromocytidine or aminocytidine or nitrosocytidine)

94 AMINOCYTIDINE

77 ETHENOCYTIDINE

589 METHYLCYTIDINE

71 HYDROXYCYTIDINE

12 DIMETHYLCYTIDINE

2 HYDROXYETHYLCYTIDINE

20 CHLOROCYTIDINE

34 BROMOCYTIDINE

94 AMINOCYTIDINE  
 1 NITROCYTIDINE  
 S1 861 (AMINOCYTIDINE OR ETHENOCYTIDINE OR METHYLCYTIDINE OR  
 HYDROXYCYTIDINE OR DIMETHYLCYTIDINE OR  
 HYDROXYETHYLCYTIDINE OR CHLOROCYTIDINE OR BROMOCYTIDINE  
 OR AMINOCYTIDINE OR NITROSOCYTIDINE)  
 ? s (hydroxyalkylcytidine or thioalkyl cytidine or (cytidine(w)glycol) or  
 hydroxyuridine or hydroxyethyluridine)  
 0 HYDROXYALKYLCYTIDINE  
 0 THIOALKYL CYTIDINE  
 17538 CYTIDINE  
 212280 GLYCOL  
 1 CYTIDINE (W) GLYCOL  
 93 HYDROXYURIDINE  
 1 HYDROXYETHYLURIDINE  
 S2 95 (HYDROXYALKYLCYTIDINE OR THIOALKYL CYTIDINE OR  
 (CYTIDINE (W) GLYCOL) OR HYDROXYURIDINE OR  
 HYDROXYETHYLURIDINE)  
 ? s s1 or s2  
 861 S1  
 95 S2  
 S3 946 S1 OR S2  
 ? s methyluridine or ethyluridine or aminouridine or methyluridine or  
 ethyluridine or isobutyluridine or alkyluridine or nitrosouridine or  
 hydroxyalkyluridine or thioalkyluridine  
 640 METHYLURIDINE  
 90 ETHYLURIDINE  
 77 AMINOURIDINE  
 640 METHYLURIDINE  
 90 ETHYLURIDINE  
 1 ISOBUTYLURIDINE  
 35 ALKYLURIDINE  
 0 NITROSOURIDINE  
 2 HYDROXYALKYLURIDINE  
 4 THIOALKYLURIDINE  
 S4 815 METHYLURIDINE OR ETHYLURIDINE OR AMINOURIDINE OR  
 METHYLURIDINE OR ETHYLURIDINE OR ISOBUTYLURIDINE OR  
 ALKYLURIDINE OR NITROSOURIDINE OR HYDROXYALKYLURIDINE OR  
 THIOALKYLURIDINE  
 ? s s3 or s4  
 946 S3  
 815 S4  
 S5 1612 S3 OR S4  
 ? s ethenoadenosine or methyladenosine or hydroxyguanosine or methylguanosine  
 or ethylguanosine or isopropylguanosine or ethenoguanosine or alkylguanosine  
 or oxoguanosine or ethenoguanosine or aminoguanosine  
 684 ETHENOADENOSINE  
 979 METHYLADENOSINE  
 132 HYDROXYGUANOSINE  
 1303 METHYLGUANOSINE  
 48 ETHYLGUANOSINE  
 2 ISOPROPYLGUANOSINE  
 35 ETHENOGUANOSINE  
 35 ALKYLGUANOSINE  
 213 OXOGUANOSINE  
 35 ETHENOGUANOSINE  
 187 AMINOGUANOSINE  
 S6 3344 ETHENOADENOSINE OR METHYLADENOSINE OR HYDROXYGUANOSINE OR  
 METHYLGUANOSINE OR ETHYLGUANOSINE OR ISOPROPYLGUANOSINE  
 OR ETHENOGUANOSINE OR ALKYLGUANOSINE OR OXOGUANOSINE OR  
 ETHENOGUANOSINE OR AMINOGUANOSINE  
 ? s s6 or s5  
 3344 S6  
 1612 S5  
 S7 4722 S6 OR S5

? s s7 and (mutate or mutation) and (virus or phage)

4722 S7  
1339 MUTATE  
376161 MUTATION  
889187 VIRUS  
98317 PHAGE

S8 102 S7 AND (MUTATE OR MUTATION) AND (VIRUS OR PHAGE)

? rd

>>>Duplicate detection is not supported for File 654.

>>>Records from unsupported files will be retained in the RD set.

...examined 50 records (50)  
...examined 50 records (100)  
...completed examining records  
S9 94 RD (unique items)

? t s9/6/1-94

9/6/1 (Item 1 from file: 155)

10025314 99307378

mRNA cap recognition: dominant role of enhanced stacking interactions  
between methylated bases and protein aromatic side chains.

Jun 22 1999

9/6/2 (Item 2 from file: 155)

08922034 97138336

Critical residues of Semliki Forest virus RNA capping enzyme  
involved in methyltransferase and guanylyltransferase-like activities.

Jan 1997

9/6/3 (Item 3 from file: 155)

07677386 94047363

Minimum internal ribosome entry site required for poliovirus infectivity.

Dec 1993

9/6/4 (Item 4 from file: 155)

07327444 92326820

Analysis of phage M13mp2 mutants produced from transfection of  
phage DNA having N4-aminocytosines at defined sequence positions.

Jul 1992

9/6/5 (Item 5 from file: 155)

06474525 90331136

Molecular mechanism of N4-aminocytidine mutagenesis]

May 1990

9/6/6 (Item 6 from file: 155)

06231772 86037468

Mutagenesis of bacteriophage T7 and T7 DNA by alkylation damage.

Nov 1985

9/6/7 (Item 7 from file: 155)

06108741 87137626

Inhibition of methylation at two internal N6-methyladenosine sites  
caused by GAC to GAU mutations.

Mar 5 1987

9/6/8 (Item 8 from file: 155)

06027482 86104233

Mutagenesis by N4-aminocytidine: induction of AT to GC transition  
and its molecular mechanism.  
Dec 3 1985

9/6/9 (Item 9 from file: 155)  
06024793 86025596

Induction of **mutation** in vitro in **phage** phi X174 am3 by  
N4-aminodeoxycytidine triphosphate.  
Sep 30 1985

9/6/10 (Item 10 from file: 155)  
05706663 89178685

Spectrum of N4-aminocytidine mutagenesis.  
Feb 20 1989

9/6/11 (Item 11 from file: 155)  
05030724 87172841

Mutagenicity of N4-aminocytidine and its derivatives in Chinese  
hamster lung V79 cells. Incorporation of N4-aminocytosine into cellular  
DNA.  
Apr 1987

9/6/12 (Item 12 from file: 155)  
04880177 86117939

Ability of base analogs to induce the SOS response: effect of a dam  
**mutation** and mismatch repair system.  
1985

9/6/13 (Item 13 from file: 155)  
04811455 85215533

Single stranded DNA SP6 promoter plasmids for engineering mutant RNAs and  
proteins: synthesis of a 'stretched' preproparathyroid hormone.  
Feb 25 1985

9/6/14 (Item 14 from file: 155)  
04325274 83272964

N4-aminocytidine, a nucleoside analog that has an exceptionally  
high mutagenic activity.  
Aug 11 1983

9/6/15 (Item 15 from file: 155)  
04311168 82117035

The cell-free protein synthesis system from the 'slime' mutant of  
Neurospora crassa. Preparation and characterisation of importance of 7-  
**methylguanosine** for translation of viral and cellular mRNAs.  
Dec 1981

9/6/16 (Item 16 from file: 155)  
04269484 83303820

Specific inhibition of vaccinia virus growth by 2'-O-  
**methyladenosine**: isolation of a drug-resistant virus mutant.  
Jul 30 1983

9/6/17 (Item 17 from file: 155)  
03291032 80165303

Mutagenic specificity of N4-hydroxycytidine.

Mar 1980

9/6/18 (Item 18 from file: 155)

03202423 76112547

Bacterial RNA methyltransferase mutants: tools in studying the biosynthesis of phage T4 tRNA. pp. 53-66.

9/6/19 (Item 19 from file: 155)

02309824 76007790

Identification of bacteriophage T4-specific precursor tRNA by using a host mutant defective in the methylation of tRNA.

Sep 1975

9/6/20 (Item 1 from file: 5)

05064909 BIOSIS NO.: 000081023033

INDUCTION OF MUTATION IN-VITRO IN PHAGE PHI-X-174 AM-3 BY N-4

AMINODEOXY-CTP

1985

9/6/21 (Item 2 from file: 5)

04281543 BIOSIS NO.: 000078011085

A RAPID AND SIMPLE METHOD FOR THE DETERMINATION OF BASE SUBSTITUTION AND FRAMESHIFT SPECIFICITY OF MUTAGENS

1983

9/6/22 (Item 3 from file: 5)

04192670 BIOSIS NO.: 000077018714

DO DNA REPAIR SYSTEMS AFFECT N-4 HYDROXY CYTIDINE INDUCED MUTAGENESIS

1983

9/6/23 (Item 4 from file: 5)

03894116 BIOSIS NO.: 000075072189

EFFECT OF PROOFREADING AND DAM INSTRUCTED MISMATCH REPAIR SYSTEMS ON N-4 HYDROXY CYTIDINE INDUCED MUTAGENESIS

1982

9/6/24 (Item 1 from file: 399)

DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Induction of mutation in vitro in phage .vphi.X174 am3 by N4-aminodeoxycytidine triphosphate

9/6/25 (Item 2 from file: 399)

DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Effect of proofreading and dam-instructed mismatch repair systems on N4-hydroxycytidine-induced mutagenesis

9/6/26 (Item 3 from file: 399)

9/7/1 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

10025314 99307378

mRNA cap recognition: dominant role of enhanced stacking interactions between methylated bases and protein aromatic side chains.

Hu G; Gershon PD; Hodel AE; Quirocho FA

Graduate Program in Structural and Computational Biology and Molecular Biophysics, Baylor College of Medicine, Houston, TX 77030, USA.

Proc Natl Acad Sci U S A (UNITED STATES) Jun 22 1999, 96 (13) p7149-54  
, ISSN 0027-8424 Journal Code: PV3

Languages: ENGLISH

Document type: JOURNAL ARTICLE

We have determined, by high resolution x-ray analysis, 10 structures comprising the mRNA cap-specific methyltransferase VP39 or specific mutants thereof in the presence of methylated nucleobase analogs (N1-methyladenine, N3-methyladenine, N1-methylcytosine, N3-methylcytosine) and their unmethylated counterparts, or nucleoside N7-methylguanosine. Together with solution affinity studies and previous crystallographic data for N7-methylguanosine and its phosphorylated derivatives, these data demonstrate that only methylated, positively charged bases are bound, indicating that their enhanced stacking with two aromatic side chains of VP39 (Tyr 22 and Phe 180) plays a dominant role in cap recognition. Four key features characterize this stacking interaction: (i) near perfect parallel alignment between the sandwiched methylated bases and aromatic side chains, (ii) substantial areas of overlap in the two-stacked rings, (iii) a 3.4-A interplanar spacing within the overlapping region, and (iv) positive charge in the heterocyclic nucleobase.

9/7/2 (Item 2 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

08922034 97138336

Critical residues of Semliki Forest virus RNA capping enzyme involved in methyltransferase and guanylyltransferase-like activities.

Ahola T; Laakkonen P; Vihinen H; Kaariainen L

Institute of Biotechnology, University of Helsinki, Finland.  
tero.ahola@helsinki.fi

J Virol (UNITED STATES) Jan 1997, 71 (1) p392-7, ISSN 0022-538X  
Journal Code: KCV

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The Semliki Forest virus (SFV) replicase protein nsP1 has methyltransferase (MT) and guanylyltransferase-like (GT) activities, which are involved in the capping of viral mRNAs. MT catalyzes the transfer of the methyl group from S-adenosylmethionine (AdoMet) to position 7 of GTP, and this reaction is followed by GT-catalyzed formation of the covalent complex m7GMP-nsP1. These reactions are virus specific and thus potential targets for inhibitors of virus replication. We have mutated residues of SFV nsP1, which are conserved in related proteins of the large alphavirus-like superfamily. Mutations of D64, D90, R93, C135, C142, and Y249 to alanine destroyed or greatly reduced the MT activity of nsP1. All MT-negative mutants lost also the GT activity, confirming that methylation of GTP is an essential prerequisite for the synthesis of the covalent guanylate complex. Mutation of H38 prevented the GT reaction

without destroying MT activity. Conservation of residues essential for both reactions in the alphavirus-like superfamily implies that they use a capping mechanism similar to that for the alphaviruses. Residues D64 and D90 were necessary for AdoMet binding, as measured by UV cross-linking. Secondary structure predictions of nsP1 and other proteins of the superfamily place these residues in positions corresponding to AdoMet-binding sites of cellular methyltransferases, suggesting that they all may be structurally related.

9/7/3 (Item 3 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

07677386 94047363

Minimum internal ribosome entry site required for poliovirus infectivity.  
Haller AA; Nguyen JH; Semler BL  
Department of Microbiology and Molecular Genetics, College of Medicine,  
University of California, Irvine 92717.

J Virol (UNITED STATES) Dec 1993, 67 (12) p7461-71, ISSN 0022-538X  
Journal Code: KCV

Contract/Grant No.: AI26765, AI, NIAID; GM 07134-18, GM, NIGMS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Translation initiation by internal ribosome binding is a recently discovered mechanism of eukaryotic viral and cellular protein synthesis in which ribosome subunits interact with the mRNAs at internal sites in the 5' untranslated RNA sequences and not with the 5' methylguanosine cap structure present at the extreme 5' ends of mRNA molecules. Uncapped poliovirus mRNAs harbor internal ribosome entry sites (IRES) in their long and highly structured 5' noncoding regions. Such IRES sequences are required for viral protein synthesis. In this study, a novel poliovirus was isolated whose genomic RNA contains two gross deletions removing approximately 100 nucleotides from the predicted IRES sequences within the 5' noncoding region. The deletions originated from previously in vivo-selected viral revertants displaying non-temperature-sensitive phenotypes. Each revertant had a different predicted stem-loop structure within the 5' noncoding region of their genomic RNAs deleted. The mutant poliovirus (Sel-5NC-delta DG) described in this study contains both stem-loop deletions in a single RNA genome, thereby creating a minimum IRES. Sel-5NC-delta DG exhibited slow growth and a pinpoint plaque phenotype following infection of HeLa cells, delayed onset of protein synthesis in vivo, and defective initiation during in vitro translation of the mutated poliovirus mRNAs. Interestingly, the peak levels of viral RNA synthesis in cells infected with Sel-5NC-delta DG occurred at slightly later times in infection than those achieved by wild-type poliovirus, but these mutant virus RNAs accumulated in the host cells during the late phases of virus infection. UV cross-linking assays with the 5' noncoding regions of wild-type and mutated RNAs were carried out in cytoplasmic extracts from HeLa cells and neuronal cells and in reticulocyte lysates to identify the cellular factors that interact with the putative IRES elements. The cellular proteins that were cross-linked to the minimum IRES may represent factors playing an essential role in internal translation initiation of poliovirus mRNAs.

9/7/4 (Item 4 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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07327444 92326820

Analysis of phage M13mp2 mutants produced from transfection of phage DNA having N4-aminocytosines at defined sequence positions.

Matsumoto K; Yashiki T; Bessho T; Negishi K; Hayatsu H  
Faculty of Pharmaceutical Sciences, Okayama University, Japan.



Journal Code: NNA

Languages: ENGLISH

Document type: JOURNAL ARTICLE

**N4-Aminocytidine** is mutagenic in various organisms. In the cell, this cytidine analog is metabolized into N4-aminodeoxycytidine 5'-triphosphate, which will then be incorporated into DNA and **mutation** will result during the replication of the DNA. To prove that the N4-aminocytosine residue in DNA is indeed the site of mutagenesis, we prepared a series of **phage** M13mp2 DNA samples that bear N4-aminocytosine residues at a few defined positions in the lacZ alpha region, by carrying out in vitro limited extension of primed **phage** DNA. We then transfected the DNAs to Escherichia coli and examined the progeny phages for the forward mutations. The M13mp2 DNAs bearing N4-aminocytosines produced mutant phages at high frequencies. Furthermore, DNA sequencing of the resulting mutants demonstrated that both AT-to-GC and GC-to-AT mutations took place at those positions where N4-aminocytosine residues were originally present.

9/7/5 (Item 5 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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06474525 90331136

Molecular mechanism of N4-**aminocytidine** mutagenesis]

Negishi K

Gene Research Center, Okayama University, Japan.

Yakugaku Zasshi (JAPAN) May 1990, 110 (5) p293-303, ISSN 0031-6903

Journal Code: JON

Languages: JAPANESE Summary Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL English  
Abstract

**N4-Aminocytidine** is strongly mutagenic towards E. coli, S. typhimurium, B. subtilis and coliphages phi X174 and M13mp2. It also causes mutations in mammalian cell lines and somatic cell mutations in D. melanogaster. The sequence analysis of deoxyribonucleic acid (DNA) from mutated phages revealed that **N4-aminocytidine** induces both adenine-thymine (AT) to guanine-cytosine (GC) and GC to AT transitions. No transversions are detectable. When E. coli and the mammalian cells were cultured in the presence of **[3H]-N4-aminocytidine**, **[3H]-N4-aminodeoxycytidine** was found in their DNA. It is likely that **N4-aminocytidine** is metabolized within the cells into N4-aminodeoxy-cytidine 5'-triphosphate (dCamTP), which is then incorporated into DNA, thereby causing base-pair transitions. To prove this hypothesis, we studied the incorporation of dCamTP into polynucleotides in the in vitro DNA synthesis catalyzed by E. coli DNA polymerase I large fragment (Klenow enzyme) and DNA polymerase alpha from a mouse cell line. Both polymerases catalyze incorporation of dCamTP into DNA efficiently in place of dCTP opposite guanine, and less efficiently, but to a significant extent, in place of dTTP opposite adenine. These observations prove the erroneous nature of dCamTP as a substrate for DNA synthesis. DNA containing N4-aminocytosine was prepared by the incorporation of dCamTP into single-stranded **phage** DNA annealed to complementary oligonucleotides. The DNA was transfected to E. coli cells. The analysis of progeny phages indicates that N4-aminocytosine residue in DNA causes A to G or G to A **mutation** in the position opposite to the site where N4-aminocytosine should be incorporated. (33 Refs.)

9/7/6 (Item 6 from file: 155).

DIALOG(R)File 155:MEDLINE(R)

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06231772 86037468

Mutagenesis of bacteriophage T7 and T7 DNA by alkylation damage.  
Masker WE; Dodson L; Maupin M  
J Virol (UNITED STATES) Nov 1985, 56 (2) p644-6, ISSN 0022-538X  
Journal Code: KCV  
Contract/Grant No.: GM-28113, GM, NIGMS; GM-7438, GM, NIGMS  
Languages: ENGLISH  
Document type: JOURNAL ARTICLE

We have developed a new assay for in vitro mutagenesis of bacteriophage T7 DNA that measures the generation of mutations in the specific T7 gene that codes for the **phage** ligase. This assay was used to examine mutagenesis caused by in vitro DNA synthesis in the presence of O6-methylguanosine triphosphate. Reversion of one of the newly generated ligase mutants by ethyl methanesulfonate was also tested.

9/7/7 (Item 7 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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06108741 87137626

Inhibition of methylation at two internal N6-methyladenosine sites caused by GAC to GAU mutations.

Kane SE; Beemon K  
J Biol Chem (UNITED STATES) Mar 5 1987, 262 (7) p3422-7, ISSN 0021-9258 Journal Code: HIV  
Contract/Grant No.: CA33199, CA, NCI; S07 RRO 7041  
Languages: ENGLISH  
Document type: JOURNAL ARTICLE

We previously have mapped N6-methyladenosine (m6A) sites within the genomic RNA of Rous sarcoma virus (RSV). The results of that study and of experiments using inhibitors of methylation suggest that m6A might be involved in mRNA processing events. We describe an approach for directly analyzing the function of m6A in RNA and for studying the sequence specificity of the m6A methylase. Two sites of methylation in RSV (nucleotides 7414 and 7424) were altered by oligonucleotide-directed mutagenesis. The highly conserved GAC consensus sequence at those sites was changed to GAU. The new sequences were no longer methylated in the RSV genomic RNA; the GAC sequence was required for efficient base modification at those two adenosines. The altered m6A pattern did not affect viral RNA processing or the viral life cycle within infected cells.

9/7/8 (Item 8 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

06027482 86104233

Mutagenesis by N4-aminocytidine: induction of AT to GC transition and its molecular mechanism.

Negishi K; Takahashi M; Yamashita Y; Nishizawa M; Hayatsu H  
Biochemistry (UNITED STATES) Dec 3 1985, 24 (25) p7273-8, ISSN 0006-2960 Journal Code: A0G  
Languages: ENGLISH  
Document type: JOURNAL ARTICLE

N4-Aminocytidine is a potent mutagen toward Escherichia coli and Salmonella typhimurium. It induced reversion of an amber mutant of phi X174 **phage** (am3) to the wild type. This reversion was shown to be exclusively due to the AT to GC transition. It is likely that N4-aminocytidine is metabolized within the bacterial cells into N4-aminodeoxycytidine 5'-triphosphate and this nucleotide is incorporated into DNA during the multiplication of the cells and the phages, thereby causing base-pair transitions. The molecular basis for this erroneous replication was obtained in studies of in vitro incorporation of N4-aminodeoxycytidine 5'-triphosphate into polynucleotides catalyzed by the E. coli DNA polymerase I large fragment. The results have shown that this

cytosine analogue can be efficiently incorporated as a substitute of cytosine and that it can also be incorporated as a substitute of thymine. The ratio in the rate of the N4-aminocytosine nucleotide incorporation to that of natural nucleotide incorporation was 1/2 to cytosine and 1/30 to thymine. Furthermore, the N4-aminocytosine residues in the polynucleotide templates can be read by the enzyme as efficiently as cytosines, and guanines were incorporated opposite to them.

9/7/9 (Item 9 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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06024793 86025596

Induction of **mutation** in vitro in **phage** phi X174 am3 by N4-aminodeoxycytidine triphosphate.

Takahashi M; Negishi K; Hayatsu H  
Biochem Biophys Res Commun (UNITED STATES) Sep 30 1985, 131 (3)  
p1277-83, ISSN 0006-291X Journal Code: 9Y8  
Languages: ENGLISH

Document type: JOURNAL ARTICLE

When phi X174 am3-**phage**-infected E. coli is treated with N4-**aminocytidine**, reversion of the **phage** to the wild type is efficiently induced. The mechanism of this reversion is considered to consist of metabolic conversion of N4-**aminocytidine** into its deoxynucleoside 5'-triphosphate followed by incorporation of the nucleotide into the replicating **phage** DNA, thereby causing AT-to-GC transition at the am3 locus. The second half of this mechanism has now been experimentally proved, using an in vitro mutagenesis system. Thus, by nick-translation, N4-aminodeoxycytidine 5'-triphosphate was incorporated into the replicative form of phi X174 am3 DNA, and the DNA was used to transfect CA++-treated E. coli HF4714 (sup+). The reversion frequency of the **phage** produced was up to one-order of magnitude greater than that of the control in which the nick-translation had been done without the addition of N4-aminodeoxycytidine triphosphate. This nucleotide analog may be useful as a reagent for in vitro site-directed mutagenesis.

9/7/10 (Item 10 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
(c) format only 1999 Dialog Corporation. All rts. reserv.

05706663 89178685

Spectrum of N4-**aminocytidine** mutagenesis.

Bessho T; Matsumoto K; Nomura A; Hayatsu H; Negishi K  
Faculty of Pharmaceutical Sciences, Okayama University, Japan.  
J Mol Biol (ENGLAND) Feb 20 1989, 205 (4) p659-64, ISSN 0022-2836  
Journal Code: J6V

Languages: ENGLISH

Document type: JOURNAL ARTICLE

N4-**Aminocytidine**, a nucleoside analog, is a potent mutagen towards phages, bacteria, Drosophila and mammalian cells in culture. In vitro, biochemical studies indicate that this reagent acts by being incorporated into DNA. To elucidate the mechanism of N4-**aminocytidine** mutagenesis, it is essential to identify the nature of DNA sequence alterations taking place during the mutagenesis. We have analyzed the nucleotide sequence changes in the lac promoter-lacZ alpha region of M13mp2 **phage** induced by treatment of **phage**-infected Escherichia coli with N4-**aminocytidine**. The sequence alterations of DNA samples from 89 mutants of the **phage** were determined. These mutants had single point mutations, except one mutant, in which a double point **mutation** was detected. Several hot spots were found: however, there are no apparent relations to particular DNA sequences regarding the locations of these spots. All the mutations are transitions; neither transversions nor deletions/insertions were found. A feature in these transitions is that the

A/T to G/C and G/C to A/T changes occur at approximately equal rates. The overall picture of the mutagenesis is consistent with a scheme in which misincorporation and misreplication caused by the modified cytosine structure are the key steps in the DNA replication leading to transitions. Similar nucleotide alterations were found for the mutagenesis induced by an alkylated derivative, N'-methyl-N4-aminocytidine. N4-Aminocytidine also induced reversions of these mutants; both A/T to G/C and G/C to A/T transitions again took place.

9/7/11 (Item 11 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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05030724 87172841

Mutagenicity of N4-aminocytidine and its derivatives in Chinese hamster lung V79 cells. Incorporation of N4-aminocytosine into cellular DNA.

Nomura A; Negishi K; Hayatsu H; Kuroda Y  
Mutat Res (NETHERLANDS) Apr 1987, 177 (2) p283-7, ISSN 0027-5107  
Journal Code: NNA

Languages: ENGLISH  
Document type: JOURNAL ARTICLE

N4-Aminocytidine induced mutation to 6-thioguanine resistance in Chinese hamster lung V79 cells in culture. Previous studies with experimental systems of in vitro DNA synthesis and of phage and bacterial mutagenesis have shown that this nucleoside analog induces base-pair transitions through its incorporation into DNA, with its erroneous base-pairing property. Incorporation of exogenously added [5-3H]N4-aminocytidine into the DNA of V79 cells was in fact observed in the present study. N4-Aminodeoxycytidine was not mutagenic for the V79 cells. Several alkylated N4-aminocytidine derivatives were tested for their mutagenicity in this system. Those with an alkyl group on the N'-nitrogen of the hydrazino group at position 4 of N4-aminocytidine were mutagenic, but those having an alkyl on the N4-nitrogen were not. These results are consistent with those previously observed in the bacterial mutagenesis systems, and agree with a mechanism of mutation in which a tautomerization of N4-aminocytosine is the necessary step for causing the erroneous base pairing.

9/7/12 (Item 12 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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04880177 86117939

Ability of base analogs to induce the SOS response: effect of a dam mutation and mismatch repair system.

Bebenek K; Janion C  
Mol Gen Genet (GERMANY, WEST) 1985, 201 (3) p519-24, ISSN 0026-8925  
Journal Code: NGP

Languages: ENGLISH  
Document type: JOURNAL ARTICLE

2-Aminopurine, 2-amino-N6-hydroxyadenine, 2-amino-N6-methoxyadenine and 2-amino-N6-methyl-N6-hydroxyadenine (but not N4-hydroxycytidine), strong mutagens of base analog type, may induce the SOS response in E. coli cells. This ability is greatly enhanced in dam3 mutants and abolished in dam3mutS, dam3mutH, and dam3mutL strains, thereby suggesting that the mismatch repair system is involved in the mechanism of induction.

9/7/13 (Item 13 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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04811455 85215533

Single stranded DNA SP6 promoter plasmids for engineering mutant RNAs and proteins: synthesis of a 'stretched' preproparathyroid hormone.

Mead DA; Skorupa ES; Kemper B

Nucleic Acids Res (ENGLAND) Feb 25 1985, 13 (4) p1103-18, ISSN 0305-1048 Journal Code: O8L

Contract/Grant No.: AM 18866, AM, NIADDK

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The intergenic region of bacteriophage f1 has been subcloned into the bacteriophage SP6 promoter plasmids, pSP64 and pSP65, in both orientations. Coinfection of E. coli with these SP6 promoter/phage f1 chimeric plasmids and the interference resistance phage, IR1, results in the replication and secretion of the pSP6.f1 plasmids as single stranded DNA. Bovine preProPTH cDNAs in both the native form and a form containing an insertion of 117 base pairs in the protein coding region have been inserted in these plasmids. The RNA transcribed from the SP6.f1/preProPTH cDNA constructs was efficiently translated in the wheat germ or reticulocyte cell free systems without addition of a 7-methylguanosine cap to the RNA. In the presence of dog pancreatic or chicken oviduct microsomal membranes, conversion of the resultant pre-proteins to pro-proteins was observed. Confirmation of the "mutated" preProPTH cDNA was determined by dideoxyribonucleotide DNA sequencing of single stranded plasmid DNA. These vectors are suitable for the efficient biosynthesis of large amounts of single or double stranded DNA, and translationally active RNA. The combined properties of single stranded DNA replication and the SP6 promoter simplify the engineering of mutant RNAs and their corresponding proteins. In addition, single stranded DNA or RNA corresponding to either complementary strand may be synthesized as nucleic acid hybridization probes.

9/7/14 (Item 14 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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04325274 83272964

N4-aminocytidine, a nucleoside analog that has an exceptionally high mutagenic activity.

Negishi K; Harada C; Ohara Y; Oohara K; Nitta N; Hayatsu H

Nucleic Acids Res (ENGLAND) Aug 11 1983, 11 (15) p5223-33, ISSN 0305-1048 Journal Code: O8L

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The reaction of cytidine with hydrazine to give N4-aminocytidine was greatly promoted by addition of a less-than-stoichiometric amount of bisulfite, and the product was isolated in a good yield. N4-Aminocytidine was strongly mutagenic to bacteria (Salmonella typhimurium TA100 and TA1535, and E. coli WP2 uvrA) and to phage (phi X174 am3). The activity did not require the presence of mammalian microsomal fraction in the system. The mutagenic potency of N4-aminocytidine in these systems was two orders of magnitude greater than that of N4-amino-2'-deoxycytidine, and more than two orders of magnitude greater than that of N4-hydroxycytidine. The greater activity of the riboside than the deoxyriboside was ascribed to the lack of deoxycytidine kinase in these cells. This compound may be useful as a powerful mutagen to induce a transition mutation in microorganisms.

9/7/15 (Item 15 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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04311168 82117035

The cell-free protein synthesis system from the 'slime' mutant of Neurospora crassa. Preparation and characterisation of importance of 7-

**methylguanosine** for translation of viral and cellular mRNAs.

Szczesna-Skorupa E; Lipowicz W; Paszewski A

Eur J Biochem (GERMANY, WEST) Dec 1981, 121 (1) p163-8, ISSN 0014-2956 Journal Code: EMZ

Languages: ENGLISH

Document type: JOURNAL ARTICLE

A simple procedure for preparation of a cell-free protein synthesis system (23000 X g supernatant) from the protoplast-like 'slime' mutant of *Neurospora crassa* is described. A variety of messenger RNAs of viral and cellular origin could be efficiently and faithfully translated in this system into proteins with Mr as large as 180000. The importance of the 7-**methylguanosine** cap for mRNA translation in the *Neurospora* system was studied in detail using the cap analogs and chemically decapped messengers. As in the case of reticulocyte lysate or wheat germ extract, the extent of m7G requirement for mRNA translation in a fungal extract strongly depended on translation conditions such as incubation temperature or concentration of potassium ions, mRNA and 23000 X g supernatant protein.

9/7/16 (Item 16 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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04269484 83303820

Specific inhibition of vaccinia **virus** growth by 2'-O-**methyladenosine**: isolation of a drug-resistant **virus** mutant.

Raczynski P; Condit RC

Virology (UNITED STATES) Jul 30 1983, 128 (2) p458-62, ISSN 0042-6822 Journal Code: XEA

Contract/Grant No.: 5 RO1 AI 18094, AI, NIAID

Languages: ENGLISH

Document type: JOURNAL ARTICLE

2'-O-**methyladenosine** (Am) specifically inhibits growth of vaccinia **virus** on cultured monkey kidney (BSC40) cells. Specificity has been demonstrated by the isolation of an Am-resistant mutant of vaccinia which forms plaques on Am-treated monolayers of BSC40 cells under conditions where wild type (wt) plaque formation is inhibited. Am inhibits **virus** growth at an early stage of infection; host shut off and early **virus** protein synthesis are inhibited by the drug.

9/7/17 (Item 17 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

(c) format only 1999 Dialog Corporation. All rts. reserv.

03291032 80165303

Mutagenic specificity of N4-**hydroxycytidine**.

Sledziewska E; Janion C

Mutat Res (NETHERLANDS) Mar 1980, 70 (1) p11-6, ISSN 0027-5107 Journal Code: NNA

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The mutagenic specificity of (oh)4Cyd was examined with T4rII **phage** mutants which allow for discrimination between AT yields GC and GC yields AT base transitions. AT yields GC transitions were induced with a frequency 1-2 orders of magnitude higher than GC yields AT transitions. The mechanism of this preferential transition pathway is discussed in the light of base-analogue mutagenesis.

9/7/18 (Item 18 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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03202423 76112547

Bacterial RNA methyltransferase mutants: tool in studying the biosynthesis of phage tRNA. pp. 53-66.

Bjork GR

In: Antoni F, Farago A, ed. Post-synthetic modification of macromolecules. Amsterdam, North-Holland, 1975. W3 FE322 9th 1974 v.34. (ITALY) Journal Code: IDM

NLM Call No.: W3 FE322 9th 1974 v.34

Languages: ENGLISH

Document type: MONOGRAPH

As a first step in the elucidation of the function of methylated nucleosides in the different kinds of RNA we have earlier isolated bacterial mutants defective in the methylation of RNA. We here report the usefulness of such mutants also as tools for studying the biosynthesis of phage T4 tRNA. The isolated mutants clearly established that the RNA methylases were not onllyspecific for the nucleoside made, but also the kind of RNA they used as substrates. This very strict specificity was utilized to identify T4 precursor tRNA. We employed E. coli mutants (Trm-) defective only in the biosynthesis of 5-methyluridine (m5U) in the tRNA to establish that T4-specific tRNA contains m5U, and that this modification absolutely requires a functional host tRNA(m5U)methyltransferase. This host enzyme does not seem to be subjected to phage-directed alterations as judged by investigations of several physical properties of the host enzyme before and after phage T4 infection. When phage T4 infected E. coli, an unknown methylated RNA species appeared. This RNA migrated between rRNA and 5S RNA in G200 gel filtration chromatography. The chain length of this unknown RNA is about twice the size of tRNA. The unknown RNA was only made in phage infected cells, it was metabolically unstable. This RNA is related to tRNA since it contains m5U when made in a wild type host, but lacking this methylated nucleoside if Trm- cells were used as host. This unknown methylated RNA is considered a dimeric precursor RNA TO T4 tRNA. The precursor RNA contained several fold higher level of 1-methylguanosine (m1G) as compared to the nature T4 tRNA population. By using host mutants defective in the production of m1G in rRNA it was unabigously shown that the RNA isolated as precursor molecules were not contaminated with degradation products of rRNA. Thus the presence of m1G in the dimeric molecules is a characteristic feature of the population of precursor molecules isolated by this method. The high level of m1G could be explained by the possibility that one tRNA counterpart in a dimeric precursor contained m1G and that this tRNA when fully mature is in minority in the tRNA population. The dimeric precursor RNA contained one m5U per tRNA counterpart. Thus, the bacterial tRNA(m51)methyltransferase uses a phage T4 specific dimeric precursor as substrate. Consequently the formation of m5U in the biosynthesis of phage tRNA and presumably host tRNA is occurring on at least a dimeric precursor RNA. This requires that two or more genes for bacterial tRNA must be located close to each other on the chromosome of E. coli to produce a true substrate for the tRNA(m5U)methyltransferase.

9/7/19 (Item 19 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1999 Dialog Corporation. All rts. reserv.

02309824 76007790

Identification of bacteriophage T4-specific precursor tRNA by using a host mutant defective in the methylation of tRNA.

Bjork GR

J Virol (UNITED STATES) Sep 1975, 16 (3) p741-4, ISSN 0022-538X  
Journal Code: KCV

Languages: ENGLISH

Document type: JOURNAL ARTICLE

A mutant of Escherichia coli K-12 that is defective in the synthesis of 5-methyluridine (ribothymidine) in tRNA was used to identify precursors to phage T4-specific tRNA. The precursor molecules, isolated by gel filtration, were more than twice the size of tRNA. This

method is suitable for isolation of rather large amounts of such precursor molecules.

9/7/20 (Item 1 from file: 5)  
DIALOG(R) File 5: Biosis Previews(R)  
(c) 1999 BIOSIS. All rts. reserv.

05064909 BIOSIS NO.: 000081023033  
INDUCTION OF **MUTATION** IN-VITRO IN **PHAGE** PHI-X-174 AM-3 BY N-4  
AMINODEOXY-CTP

AUTHOR: TAKAHASHI M; NEGISHI K; HAYATSU H  
AUTHOR ADDRESS: FAC. PHARMACEUTICAL SCI., OKAYAMA UNIV., TSUSHIMA, OKAYAMA  
700, JPN.

JOURNAL: BIOCHEM BIOPHYS RES COMMUN 131 (3). 1985. 1277-1283.  
FULL JOURNAL NAME: Biochemical and Biophysical Research Communications  
CODEN: BBRCA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

ABSTRACT: When .PHI.X174 am3-**phage**-infected Escherichia coli is treated with N4-**aminocytidine**, reversion of the **phage** to the wild type is efficiently induced. The mechanism of this reversion is considered to consist of metabolic conversion of N4-**aminocytidine** into its deoxynucleoside 5'-triphosphate followed by incorporation of the nucleotide into the replicating **phage** DNA, thereby causing AT-to-GC transition at the am3 locus. The second half of this mechanism has now been experimentally proved, using an in vitro mutagenesis system. Thus, by nick-translation, N4-aminodeoxycytidine 5'-triphosphate was incorporated into the replicative form of .PHI.X174 am3 DNA, and the DNA was used to transfect Ca++-treated E. coli HF4714 (sup+). The reversion frequency of the **phage** produced was up to one-order of magnitude greater than that of the control in which the nick-translation had been done without the addition of N4-aminodeoxycytidine triphosphate. This nucleotide analog may be useful as a reagent for in vitro site-directed mutagenesis.

9/7/21 (Item 2 from file: 5)  
DIALOG(R) File 5: Biosis Previews(R)  
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04281543 BIOSIS NO.: 000078011085  
A RAPID AND SIMPLE METHOD FOR THE DETERMINATION OF BASE SUBSTITUTION AND  
FRAMESHIFT SPECIFICITY OF MUTAGENS

AUTHOR: SHINOURA Y; KATO T; GLICKMAN B W  
AUTHOR ADDRESS: DEP. FUNDAMENTAL RADIOLOGY, OSAKA UNIV. MED. SCH., OSAKA  
530, JPN.

JOURNAL: MUTAT RES 111 (1). 1983. 43-50.  
FULL JOURNAL NAME: Mutation Research  
CODEN: MUREA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

ABSTRACT: A rapid method for the determination of mutagenic specificity was developed with makes use of the ochre **mutation** (TAA) in the his-4-gene of Escherichia coli. Reversion to His+ may occur by suppressor **mutation** (Type I) or by **mutation** within the his-4 gene (Type II). The Type I mutations may be further subdivided with respect to the type of suppressor **mutation** by their ability to suppress nonsense mutants of bacteriophage T4, thus allowing the identification of the



responsible base substitution. The system has the ability to identify mutagens which produce A:T → G:C transitions. Since only Type II mutants can arise through this base substitution; and in fact, the system confirms the A:T → G:C specificity of the mutagen, N4-hydroxycytidine since only Type II mutants were induced by treatment with this base analog. When this system was further tested with several additional mutagens, ethyl methanesulfonate, methyl nitrosourea and ethyl nitrosourea seem to produce primarily Type I revertants which were primarily G:C → A:T transitions. UV-light, gamma-rays, 4NQO [4-nitroquinoline-N-oxide] and methyl methanesulfonate produced all types of base substitutions. The tester strain was further improved by introducing a series of sequenced trp- frameshift mutations, thus allowing the simultaneous monitoring of frameshift and base-substitution mutations.

9/7/22 (Item 3 from file: 5)  
DIALOG(R) File 5: Biosis Previews(R)  
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04192670 BIOSIS NO.: 000077018714  
DO DNA REPAIR SYSTEMS AFFECT N-4 HYDROXY CYTIDINE INDUCED MUTAGENESIS

AUTHOR: SLEDZIEWSKA-GOJSKA E; JANION C  
AUTHOR ADDRESS: INST. BIOCHEM. BIOPHYSICS, POLISH ACADEMY SCI., RAKOWIECKA 36, 02-532 WARSZAWA, POLAND.

JOURNAL: ACTA BIOCHIM POL 30 (2). 1983. 149-158.  
FULL JOURNAL NAME: Acta Biochimica Polonica  
CODEN: ABPLA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

ABSTRACT: It was tested whether mutations induced in Escherichia coli by N4-hydroxycytidine (oh4Cyd) undergo mutation frequency decline (MFD) when synthesis of protein is arrested, and are influenced by polA1, polA107 or xth mutations. It was also investigated whether oh4Cyd provokes SOS response and prophage lambda induction. All these processes may involve the action of repair enzymes. None of these processes or repair enzymes affects oh4Cyd-induced mutagenesis.

9/7/23 (Item 4 from file: 5)  
DIALOG(R) File 5: Biosis Previews(R)  
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03894116 BIOSIS NO.: 000075072189  
EFFECT OF PROOFREADING AND DAM INSTRUCTED MISMATCH REPAIR SYSTEMS ON N-4 HYDROXY CYTIDINE INDUCED MUTAGENESIS

AUTHOR: SLEDZIEWSKA-GOJSKA E; JANION C  
AUTHOR ADDRESS: INSTITUTE OF BIOCHEMISTRY AND BIOPHYSICS, POLISH ACADEMY OF SCIENCES, RAKOWIECKA 36, PL-02-532 WARSZAWA, POLAND.

JOURNAL: MOL GEN GENET 186 (3). 1982. 411-418.  
FULL JOURNAL NAME: Molecular & General Genetics  
CODEN: MGGEA  
RECORD TYPE: Abstract  
LANGUAGE: ENGLISH

ABSTRACT: The role of the proofreading (3' → 5' exonuclease) function of phage T4 DNA polymerase and the mismatch repair system of Escherichia coli on N4-hydroxycytidine (oh4Cyd) induced mutagenesis was investigated. oh4Cyd-induced mutation is strongly suppressed when the proofreading activity increases as a result of the

presence of tsCB87-antimutator polymerase or elevated temperature (43.degree. C vs. 30.degree. C). Mutagenic activity of oh4Cyd, however, is little, if at all, affected by the presence of the tsLB56 mutator allele of T4 DNA polymerase with suppressed proofreading activity. The oh4C nucleotides are apparently not frequently removed by proofreading activity of wild-type T4 DNA polymerase. The number of mutations induced by oh4Cyd increases 3- to 5-fold due to damage of the genes mutS, mutL, uvrE, but not mutR. Dam- cells are more sensitive to, and hypermutable by, oh4Cyd in comparison with dam+ cells. This is compatible with the notion that oh4C residues are recognized and excised by mismatch repair enzymes. Neither the proofreading function of T4 DNA polymerase nor the mismatch repair enzymes are responsible for the high specificity of oh4Cyd which causes AT to GC transitions.

9/7/24 (Item 1 from file: 399)  
DIALOG(R) File 399:CA SEARCH(R)  
(c) 1999 American Chemical Society. All rts. reserv.

103208086 CA: 103(25)208086k JOURNAL  
Induction of mutation in vitro in phage .vphi.X174 am3 by  
N4-aminodeoxycytidine triphosphate  
AUTHOR(S): Takahashi, Mitsuko; Negishi, Kazuo; Hayatsu, Hikoya  
LOCATION: Fac. Pharm. Sci., Okayama Univ., Okayama, Japan, 700  
JOURNAL: Biochem. Biophys. Res. Commun. DATE: 1985 VOLUME: 131  
NUMBER: 3 PAGES: 1277-83 CODEN: BBRCA9 ISSN: 0006-291X LANGUAGE:  
English  
SECTION:  
CA103005 Biochemical Genetics  
IDENTIFIERS: phage phiX174 mutation aminocytidine triphosphate  
DESCRIPTORS:  
Mutation, amber...  
aminocytidine-induced reversion of, in phage .vphi.X174  
Virus, bacterial, phi X174...  
DNA mutations of, aminocytidine and aminocytidine triphosphate  
induction of  
Mutation, site-specific...  
of phage .vphi.X174, aminocytidine induction of  
Deoxyribonucleic acids...  
of phage .vphi.X174, aminocytidine triphosphate incorporation into,  
site-directive mutations from  
CAS REGISTRY NUMBERS:  
57294-74-3 90335-46-9 mutations induced by, in phage .vphi.X174

9/7/25 (Item 2 from file: 399)  
DIALOG(R) File 399:CA SEARCH(R)  
(c) 1999 American Chemical Society. All rts. reserv.

97193992 CA: 97(23)193992j JOURNAL  
Effect of proofreading and dam-instructed mismatch repair systems on  
N4-hydroxycytidine-induced mutagenesis  
AUTHOR(S): Sledziowska-Gojska, Ewa; Janion, Celina  
LOCATION: Inst. Biochem. Biophys., Pol. Acad. Sci., PL 02-532, Warsaw,  
Pol.  
JOURNAL: MGG, Mol. Gen. Genet. DATE: 1982 VOLUME: 186 NUMBER: 3  
PAGES: 411-18 CODEN: MGGEAE ISSN: 0026-8925 LANGUAGE: English  
SECTION:  
CA103005 Biochemical Genetics  
IDENTIFIERS: T4 DNA polymerase repair hydroxycytidine, phage DNA  
polymerase repair hydroxycytidine, Escherichia mutation phage DNA  
polymerase  
DESCRIPTORS:  
Virus, bacterial, T4...  
DNA polymerase of, proofreading function of, in mutagenesis in

Escherichia coli  
Escherichia coli...  
DNA repair by, in mutagenesis, phage T4 DNA polymerase proofreading  
function in relation to  
Mutation...  
DNA repair in, of Escherichia coli, phage T4 DNA polymerase  
proofreading function in relation to  
Gene and Genetic element, microbial, dam...  
in hydroxycytidine-induced mutation in Escherichia coli  
Deoxyribonucleic acid formation, repair...  
in mutation in Escherichia coli, phage T4 DNA polymerase proofreading  
function in relation to  
CAS REGISTRY NUMBERS:  
3258-02-4 mutation from, DNA polymerase proofreading function and mismatch  
repair in, in Escherichia coli  
9012-90-2 proofreading function of, of phage T4, in mutagenesis in  
Escherichia coli

9/7/26 (Item 3 from file: 399)  
DIALOG(R) File 399: CA SEARCH(R)  
(c) 1999 American Chemical Society. All rts. reserv.

91169057 CA: 91(21)169057p JOURNAL  
Mutagenesis induced in amber P22 phages by base analogs  
AUTHOR(S): Janion, Celina; Kajtaniak, Elzbieta  
LOCATION: Inst. Biochem. Biophys., Polish Acad. Sci., 02-532, Warsaw,  
Pol.  
JOURNAL: Mutat. Res. DATE: 1979 VOLUME: 62 NUMBER: 1 PAGES: 191-5  
CODEN: MUREAV ISSN: 0027-5107 LANGUAGE: English  
SECTION:  
CA003002 Biochemical Interactions  
IDENTIFIERS: hydroxycytidine mutagenesis phage, cytidine analog mutagen  
bacteriophage  
DESCRIPTORS:  
Mutation...  
from cytidine analogs, in bacteriophage P22  
Virus, bacterial, P22...  
mutations in, from cytidine analogs  
CAS REGISTRY NUMBERS:  
65-46-3D analog, mutagenic activity of, in bacteriophage P22  
1867-16-9 1867-17-0 3258-02-4 mutagenic activity of, in bacteriophage  
P22  
? t s9/3, ab/36, 37, 40, 55, 58, 68, 71, 84, 88, 89

9/3, AB/36 (Item 10 from file: 654)  
DIALOG(R) File 654: US Pat. Full.  
(c) format only 1999 The Dialog Corp. All rts. reserv.

02994164

Utility  
ADENOVIRUS HELPER-FREE SYSTEM FOR PRODUCING RECOMBINANT AAV VIRIONS LACKING  
ONCOGENIC SEQUENCES

PATENT NO.: 5,945,335  
ISSUED: August 31, 1999 (19990831)  
INVENTOR(s): Colosi, Peter, Alameda, CA (California), US (United States of  
America)  
ASSIGNEE(s): Avigen, Inc, (A U.S. Company or Corporation), Alameda, CA  
(California), US (United States of America)  
APPL. NO.: 9-116,780  
FILED: July 16, 1998 (19980716)

#### 1. RELATED APPLICATIONS

This application is a continuation-in-part of pending U.S. patent application Ser. No. 8-745,957 of Peter C. Colosi filed Nov. 7, 1996 and entitled "Accessory Functions for Use in Recombinant AAV Virion Production," which Patent Application is incorporated herein by reference. U.S. patent application Ser. No. 08-745,957 is related to and claims priority under 35 U.S.C. selection 119(e)(1) from Provisional Application 60-006,402, filed Nov. 9, 1995. Provisional application 60-006,402 is incorporated herein by reference.

FULL TEXT: 1125 lines

#### ABSTRACT

Composition and methods are provided for producing recombinant AAV ("rAAV") in the absence of helper virus, such as adenovirus. The compositions provide the accessory functions necessary for supporting rAAV virion production in host cells. In certain embodiments, the accessory functions are provided by vectors comprising nucleotide sequences from an adenoviral E4 region which lack the putatively oncogenic E4 ORF 6 coding region. The present invention also includes host cells transfected by the claimed accessory function vectors, methods of using such vectors, and rAAV virions produced by such methods.

9/3,AB/37 (Item 11 from file: 654)  
DIALOG(R)File 654:US Pat.Full.  
(c) format only 1999 The Dialog Corp. All rts. reserv.

02976657

Utility  
METHOD FOR PREPARING MUTANT GENES

PATENT NO.: 5,928,866  
ISSUED: July 27, 1999 (19990727)  
INVENTOR(s): Imamoto, Fumio, Osaka, JP (Japan)  
Ishino, Yoshizumi, Shiga, JP (Japan)  
Furusawa, Mitsuru, Tokyo, JP (Japan)  
Doi, Hirofumi, Kanagawa, JP (Japan)  
ASSIGNEE(s): Research Development Corporation of Japan, (A Non-U.S. Company or Corporation), Saitama, JP (Japan)  
[Assignee Code(s): 70929]  
APPL. NO.: 8-573,419  
FILED: December 15, 1995 (19951215)  
PRIORITY: 6-312261, JP (Japan), December 15, 1994 (19941215)  
6-312262, JP (Japan), December 15, 1994 (19941215)  
7-173715, JP (Japan), July 10, 1995 (19950710)

FULL TEXT: 444 lines

#### ABSTRACT

This invention provides A method for preparing mutant genes, which comprises the steps of constructing a recombinant plasmid DNA by inserting a gene fragment into a plasmid DNA having a unidirectional origin, introducing the recombinant plasmid DNA into host cell lacking DNA error-correcting function to transform the host cell, and culturing the transformant cell in a condition that any mutations of the inserted gene is detectable. According to the present invention, diverse mutant genes can be prepared in a short period of time.

9/3,AB/40 (Item 14 from file: 654)  
DIALOG(R)File 654:US Pat.Full.  
(c) format only 1999 The Dialog Corp. All rts. reserv.

0295050

Utility

[5--CARBOXAMIDO OR 5--FLUORO]--[2', 3'--UNSATURATED OR 3'--MODIFIED]--PYRIMIDINE NUCLEOSIDES

PATENT NO.: 5,905,070

ISSUED: May 18, 1999 (19990518)

Set	Items	Description
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? b 410

	03nov99 20:02:15	User233835 Session D323.1
	\$0.18	0.055 DialUnits File1
\$0.18	Estimated cost	File1
\$0.01	TELNET	
\$0.19	Estimated cost	this search
\$0.19	Estimated total session cost	0.055 DialUnits

File 410:Chronolog(R) 1981-1999 Sep/Oct  
(c) 1999 The Dialog Corporation plc

Set	Items	Description
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? set hi ;set hi

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HILIGHT set on as ''

? b 155, 5, 399, 357

	03nov99 20:02:36	User233835 Session D323.2
	\$0.00	0.049 DialUnits File410
\$0.00	Estimated cost	File410
\$0.06	TELNET	
\$0.06	Estimated cost	this search
\$0.25	Estimated total session cost	0.103 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 155:MEDLINE(R) 1966-1999/Dec W4

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\*File 155: Medline updates are complete for 1999.

First update for 2000 will be added in mid-December.

File 5:Biosis Previews(R) 1969-1999/Oct W2

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File 399:CA SEARCH(R) 1967-1999/UD=13118

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\*File 399: Use is subject to the terms of your user/customer agreement.

RANK charge added; see HELP RATES 399.

File 357:Derwent Biotechnology Abs 1982-1999/Sep B2

(c) 1999 Derwent Publ Ltd

\*File 357: Derwent changes DialUnit pricing from May 1, 1999. See  
HELP DERWENT for details.

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E2	3	AU=FIELDS, ANTHONY L. A.
E3	0	*AU=FIELDS, B
E4	4	AU=FIELDS, B.
E5	5	AU=FIELDS, B. A.
E6	2	AU=FIELDS, B. ANNE
E7	1	AU=FIELDS, B. C.

E8	5	AU=FIELDS, B. D.
E9	1	AU=FIELD, B. F.
E10	1	AU=FIELDS, B. J.
E11	3	AU=FIELDS, B. L.
E12	10	AU=FIELDS, B. N.

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E13	1	AU=FIELDS, B. S.
E14	1	AU=FIELDS, BARRY
E15	22	AU=FIELDS, BARRY A.
E16	1	AU=FIELDS, BARRY F.
E17	2	AU=FIELDS, BARRY L.
E18	14	AU=FIELDS, BARRY S.
E19	10	AU=FIELDS, BERNARD
E20	1	AU=FIELDS, BERNARD H.
E21	131	AU=FIELDS, BERNARD N.
E22	2	AU=FIELDS, BRANCH T., JR.
E23	3	AU=FIELDS, BRIAN
E24	15	AU=FIELDS, BRIAN D.

Enter P or PAGE for more

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Ref	Items	Index-term
E25	1	AU=FIELDS, BRIAN DAVID
E26	1	AU=FIELDS, C.
E27	43	AU=FIELDS, C. A.
E28	1	AU=FIELDS, C. C.
E29	1	AU=FIELDS, C. D.
E30	7	AU=FIELDS, C. G.
E31	2	AU=FIELDS, C. H.
E32	11	AU=FIELDS, C. L.
E33	5	AU=FIELDS, CALVIN H.
E34	1	AU=FIELDS, CAROL
E35	1	AU=FIELDS, CARTER T.
E36	1	AU=FIELDS, CHARLES

Enter P or PAGE for more

? s el2

S3 10 AU="FIELDS, B. N."

? t s3/6/1-10

3/6/1 (Item 1 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Molecular structure of the cell-attachment protein of reovirus:  
correlation of computer-processed electron micrographs with sequence-based  
predictions

3/6/2 (Item 2 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

Binding and transepithelial transport of immunoglobulins by intestinal M  
cells: demonstration using monoclonal IgA antibodies against enteric viral  
proteins

3/6/3 (Item 3 from file: 399)  
DIALOG(R)File 399:(c) 1999 American Chemical Society. All rts. reserv.

The molecular basis of reovirus virulence

3/6/4 (Item 4 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

The genetic basis of viral virulence

3/6/5 (Item 5 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Molecular basis of reovirus virulence. Brief review

3/6/6 (Item 6 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Reassortment of genome segments between reovirus defective interfering particles and infectious virus: construction of temperature-sensitive and attenuated viruses by rescue of mutations from DI particles

3/6/7 (Item 7 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

The molecular basis of reovirus virulence

3/6/8 (Item 8 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

A comparison of the intracellular polypeptides of measles and subacute sclerosing panencephalitis virus

3/6/9 (Item 9 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

Fate of input oncornavirion RNA. Biological studies

3/6/10 (Item 10 from file: 399)  
DIALOG(R) File 399: (c) 1999 American Chemical Society. All rts. reserv.

pH-dependence of reovirus synthesis  
? t s3/7/1-10

3/7/1 (Item 1 from file: 399)  
DIALOG(R) File 399: CA SEARCH(R)  
(c) 1999 American Chemical Society. All rts. reserv.

113036664 CA: 113(5)36664k JOURNAL  
Molecular structure of the cell-attachment protein of reovirus:  
correlation of computer-processed electron micrographs with sequence-based  
predictions  
AUTHOR(S): Fraser, R. D. B.; Furlong, D. B.; Trus, B. L.; Nibert, M. L.;  
Fields, B. N.; Steven, A. C.  
LOCATION: Comp. Syst. Lab., Fogarty International Cent., Bethesda, MD,  
20892, USA  
JOURNAL: J. Virol. DATE: 1990 VOLUME: 64 NUMBER: 6 PAGES: 2990-2000  
CODEN: JOVIAM ISSN: 0022-538X LANGUAGE: English  
SECTION:  
CA206003 General Biochemistry  
IDENTIFIERS: reovirus signal protein structure, conformation signal  
protein reovirus, quaternary structure signal protein reovirus, cell



attachment protein structure reovirus

DESCRIPTORS:

Conformation and Conformers, secondary... Quaternary structure...  
of .sigma.1 protein, of reovirus, model of  
Virus, animal, reo-...  
.sigma.1 protein of, structural model for  
Proteins, specific or class, .sigma.1...  
structure of, of reovirus, model for

3/7/2 (Item 2 from file: 399)

DIALOG(R) File 399:CA SEARCH(R)

(c) 1999 American Chemical Society. All rts. reserv.

110190740 CA: 110(21)190740b JOURNAL

Binding and transepithelial transport of immunoglobulins by intestinal M cells: demonstration using monoclonal IgA antibodies against enteric viral proteins

AUTHOR(S): Weltzin, R.; Lucia-Jandris, P.; Michetti, P.; Fields, B. N.; Kraehenbuhl, J. P.; Neutra, M. R.

LOCATION: Med. Sch., Harvard Univ., Boston, MA, 02115, USA

JOURNAL: J. Cell Biol. DATE: 1989 VOLUME: 108 NUMBER: 5 PAGES:

1673-85 CODEN: JCLBA3 ISSN: 0021-9525 LANGUAGE: English

SECTION:

CA215003 Immunochemistry

IDENTIFIERS: virus Ig transport intestine, intestine M cell transport Ig

DESCRIPTORS:

Bile... Liver, metabolism...

anti-viral IgA transport in, secretory component addn. in

Virus, animal, murine mammary tumor... Virus, animal, reovirus 1...

antigens of, IgA to, binding and transepithelial transport of, by  
intestinal M cells

Lymph gland, Peyer's patch, M cell...

IgA to viral antigens binding and transepithelial transport by

Immunoglobulins, A, monoclonal...

to enteric viral antigens, binding and transepithelial transport of, by  
intestinal M cells

Glycophosphoproteins, .mu.1C... Glycoproteins, specific or class, gp52...

Protein formation initiation factors, .sigma.3...

viral, monoclonal IgA to, binding and transepithelial transport of, by  
intestinal M cells

Immune complexes...

virus-Ig, binding and transepithelial transport of, by intestinal M  
cells

3/7/3 (Item 3 from file: 399)

DIALOG(R) File 399:CA SEARCH(R)

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101020250 CA: 101(3)20250p JOURNAL

The molecular basis of reovirus virulence

AUTHOR(S): Brown, E. G.; Fields, B. N.

LOCATION: Dep. Microbiol. Mol. Genet., Harvard Med. Sch., Boston, MA,  
02115, USA

JOURNAL: Ig. Mod. DATE: 1983 VOLUME: 80 NUMBER: 6 PAGES: 1002-17

CODEN: IGMPAX ISSN: 0019-1655 LANGUAGE: English

SECTION:

CA110000 Microbial Biochemistry

CA103XXX Biochemical Genetics

IDENTIFIERS: review reovirus virulence genetics

DESCRIPTORS:

Virus, animal, reo-...

mol. basis of virulence of

Genetics...

of reovirus, virulence in relation to

3/7/4 (Item 4 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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100003104 CA: 100(1)3104f JOURNAL  
The genetic basis of viral virulence  
AUTHOR(S): Fields, B. N.; Byers, Karen  
LOCATION: Dep. Microbiol. Mol. Genet., Harvard Med. Sch., MA, 02115, USA  
JOURNAL: Philos. Trans. R. Soc. London, Ser. B DATE: 1983 VOLUME: 303  
NUMBER: 1114 PAGES: 209-18 CODEN: PTRBAE ISSN: 0080-4622 LANGUAGE:  
English  
SECTION:  
CA110000 Microbial Biochemistry  
CA103XXX Biochemical Genetics  
CA114XXX Mammalian Pathological Biochemistry  
IDENTIFIERS: review virus virulence genetics  
DESCRIPTORS:  
Genetics...  
of virus virulence  
Virus, animal...  
virulence of, genetics of

3/7/5 (Item 5 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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96158824 CA: 96(19)158824p JOURNAL  
Molecular basis of reovirus virulence. Brief review  
AUTHOR(S): Fields, B. N.  
LOCATION: Dep. Microbiol. Mol. Genet., Harvard Med. Sch., Boston, MA, USA  
JOURNAL: Arch. Virol. DATE: 1982 VOLUME: 71 NUMBER: 2 PAGES: 95-107  
CODEN: ARVIDF ISSN: 0304-8608 LANGUAGE: English  
SECTION:  
CA110000 Microbial Biochemistry  
CA114XXX Mammalian Pathological Biochemistry  
IDENTIFIERS: review reovirus virulence, virus reo virulence review  
DESCRIPTORS:  
Virus, animal, reo-...  
virulence of, mol. basis of

3/7/6 (Item 6 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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95038980 CA: 95(5)38980u JOURNAL  
Reassortment of genome segments between reovirus defective interfering  
particles and infectious virus: construction of temperature-sensitive and  
attenuated viruses by rescue of mutations from DI particles  
AUTHOR(S): Ahmed, Rafi; Fields, B. N.  
LOCATION: Dep. Microbiol. Mol. Genet., Harvard Med. Sch., Boston, MA,  
02115, USA  
JOURNAL: Virology DATE: 1981 VOLUME: 111 NUMBER: 2 PAGES: 351-63  
CODEN: VIRLAX ISSN: 0042-6822 LANGUAGE: English  
SECTION:  
CA010004 Microbial Biochemistry  
IDENTIFIERS: reovirus defective interfering particle recombination,  
mutation reovirus defective interfering particle, RNA reovirus defective  
interfering particle  
DESCRIPTORS:  
Recombination, genetic...

by reoviral defective interfering particles, mutation rescue by  
Virus, animal, reo-...  
defective interfering particles of, mutation rescue from, by  
recombination  
Ribonucleic acids, viral...  
of reovirus defective interfering particles, rescue of mutations in  
Mutation...  
rescue of, of reoviral defective interfering particles, by  
recombination  
Proteins...  
.sigma.3, of capsid of reoviral defective interfering particle,  
mutation in RNA for

3/7/7 (Item 7 from file: 399)  
DIALOG(R) File 399:CA SEARCH(R)  
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94117396 CA: 94(15)117396r JOURNAL  
The molecular basis of reovirus virulence  
AUTHOR(S): Fields, B. N.; Weiner, H. L.; Drayna, D. T.; Sharpe, A. H.;  
Hrdy, D.; Rubin, D.; Burstin, S.; Ahmed, R.; Gentsch, J.; Donis-Keller, H.  
LOCATION: Dep. Microbiol. Mol. Genet., Harvard Med. Sch., Boston, MA,  
02115, USA  
JOURNAL: ICN-UCLA Symp. Mol. Cell. Biol. DATE: 1980 VOLUME: 18  
NUMBER: Anim. Virus Genet. PAGES: 663-71 CODEN: IUSMDJ ISSN: 0097-9023  
LANGUAGE: English  
SECTION:  
CA010000 Microbial Biochemistry  
IDENTIFIERS: review reovirus virulence, virus reo virulence review  
DESCRIPTORS:  
Virus, animal, reo-...  
virulence of, mol. basis for

3/7/8 (Item 8 from file: 399)  
DIALOG(R) File 399:CA SEARCH(R)  
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91120009 CA: 91(15)120009k CONFERENCE PROCEEDING  
A comparison of the intracellular polypeptides of measles and subacute  
sclerosing panencephalitis virus  
AUTHOR(S): Wechsler, S. L.; Stallcup, Kathryn C.; Fields, B. N.  
LOCATION: Dep. Microbiol. Mol. Genet., Harvard Med. Sch., Boston, MA,  
02115, USA  
JOURNAL: Negat. Strand Viruses Host Cell, (Cambridge Virus Symp.), 3rd  
EDITOR: Mahy, Brian W. J. (Ed), Barry, Richard D (Ed), DATE: 1978  
PAGES: 169-80 CODEN: 41BOA6 LANGUAGE: English MEETING DATE: 77  
PUBLISHER: Academic, London, Engl  
SECTION:  
CA010001 Microbial Biochemistry  
IDENTIFIERS: protein measles sclerosing panencephalitis virus  
DESCRIPTORS:  
Peptides, biological studies... Proteins...  
of measles and subacute sclerosing panencephalitis viruses  
Animal cell, virus-infected... Cell nucleus... Cytoplasm...  
protein formation by measles and subacute sclerosing panencephalitis  
viruses in  
Virus, animal, subacute sclerosing panencephalitis...  
proteins of, measles virus in relation to  
Virus, animal, measles...  
proteins of, subacute sclerosing panencephalitis virus in relation to

3/7/9 (Item 9 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)  
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84161628 CA: 84(23)161628k JOURNAL  
Fate of input oncornavirion RNA. Biological studies  
AUTHOR(S): Sveda, M. M.; Fields, B. N.; Soeiro, R.  
LOCATION: Dep. Med., Albert Einstein Coll. Med., Bronx, N. Y.  
JOURNAL: J. Virol. DATE: 1976 VOLUME: 18 NUMBER: 1 PAGES: 85-91  
CODEN: JOVIAM LANGUAGE: English  
SECTION:  
CA910002 Microbial Biochemistry  
IDENTIFIERS: Friend leukemia virus replication, RNA DNA hybrid  
oncornavirus replication  
DESCRIPTORS:  
Ribonucleic acids, viral...  
DNA hybrids, in oncornavirus replication  
Virus, animal...  
Friend leukemia, replication of, RNA-DNA hybrids in  
Deoxyribonucleic acids...  
viral, RNA hybrids, in oncornavirus replication

3/7/10 (Item 10 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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79002634 CA: 79(1)2634q JOURNAL  
pH-dependence of reovirus synthesis  
AUTHOR(S): Fields, B. N.; Eagle, H.  
LOCATION: Dep. Med., Albert Einstein Coll. Med., Bronx, N. Y.  
JOURNAL: Virology DATE: 1973 VOLUME: 52 NUMBER: 2 PAGES: 581-3  
CODEN: VIRLAX LANGUAGE: English  
SECTION:  
CA910003 Microbial Biochemistry  
IDENTIFIERS: pH reovirus, virus pH  
DESCRIPTORS:  
Virus, animal...  
reo-, pH effect on  
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E2	1	AU=JOKLIK TW
E3	1	*AU=JOKLIK W
E4	215	AU=JOKLIK W K
E5	125	AU=JOKLIK WK
E6	9	AU=JOKLIK WOLFGANG K
E7	1	AU=JOKLIK, G. F.
E8	2	AU=JOKLIK, J.
E9	11	AU=JOKLIK, JAROSLAV
E10	7	AU=JOKLIK, OTTO
E11	2	AU=JOKLIK, OTTO F.
E12	1	AU=JOKLIK, R.

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125 AU=JOKLIK WK  
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340 S4  
10049 NITROSOGUANIDINE

1818 PROFLAVINE  
S5 1818 S4 NITROSOGUANIDINE OR PROFLAVINE  
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340 S4  
10049 NITROSOGUANIDINE  
1818 PROFLAVINE  
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7/7/1 (Item 1 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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01385588 BIOSIS NO.: 000057025548  
TEMPERATURE SENSITIVE MUTANTS OF REOVIRUS PART 4 EVIDENCE THAT ANOMALOUS  
ELECTROPHORETIC MIGRATION BEHAVIOR OF CERTAIN DOUBLE STRANDED RNA HYBRID  
SPECIES IS MUTANT GROUP SPECIFIC  
AUTHOR: SCHUERCH A R; JOKLIK W K  
JOURNAL: VIROLOGY 56 (1). 1973 218-229.  
FULL JOURNAL NAME: Virology  
CODEN: VIRLA  
RECORD TYPE: Citation

7/7/2 (Item 2 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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00261609 BIOSIS NO.: 000050076609  
ISOLATION AND PRELIMINARY GENETIC AND BIOCHEMICAL CHARACTERIZATION OF  
TEMPERATURE SENSITIVE MUTANTS OF REOVIRUS NEOPL L CELLS RECOMBINATION  
NITROUS-ACID MUTAGEN NITROSO GUANADINE MUTAGEN PROFLAVINE MUTAGEN  
AUTHOR: FIELDS B N; JOKLIK W K  
JOURNAL: VIROLOGY 37 (3). 335-342. 1969.  
FULL JOURNAL NAME: Virology  
CODEN: VIRLA  
RECORD TYPE: Citation  
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03nov99 20:08:20 User233835 Session D323.3  
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\$0.58 Estimated cost File155  
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